

MODERN PACKAGING



FEBRUARY 1955

IN THIS ISSUE: Canning is America's biggest
and most widespread packaging industry

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What makes a
carton better?

GAIR Production

one of the features of Gair's Coordinated Packaging Service

Let's say — just for the moment — that careful planning has assured you of a carton that's not only going to contain your product — but also help sell it.

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Some of these folding and gluing machines turn as many as 75,000 blanks an hour into folding cartons. Others glue cellophane windows on cake or cookie cartons, for example. All Gair production operations are held to precise tolerances so there is no variation between cartons to jam your mechanical packaging machinery.

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FC.4.11



GAIR

FOLDING CARTONS
SHIPPING CONTAINERS • PAPERBOARD

ROBERT GAIR COMPANY, INC. • 155 EAST 44TH STREET • NEW YORK 17

FEBRUARY 1955

MODERN PACKAGING

February 1955, Vol. 28, No. 6

How do you test package design?	83	Labels that can take it	120
There's still no research substitute for experience, say today's leaders, but here are 10 ways they are trying to find out what's in consumers' minds.			
Acetate boxes from a new machine	90	Display Gallery	124
Their straight, strong electronic seams are produced automatically by high-speed robot that may open low-cost plastic-sheet market.			
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The oldest form of consumer packaging today measures its progress in the tens of billions of metal and glass containers used each year. A MODERN PACKAGING Industry Survey.			
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It proves that even a great package can be made still better: more impact, more color, stronger identity, greater taste appeal.			
Protective foam	107	12 entries receive signal recognition among 3,000 in second annual Package Designers Council competition.	
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REDINGTON

Automatic Cartoning can give **YOU** "PAY-OFF" PRODUCTION

Are you still paying the penalties of hand-packaging, day after day, week after week? Perhaps you have the idea that only huge operations can afford the modern equipment which cuts so sharply into costs on the packaging line—and it's true that you'll find volume producers like the S.S.S. Company of Atlanta depending on REDINGTONS for maximum efficiency in this end of their business.

But the fact is that REDINGTONS are earning a profit for many, many packagers whose production is on a smaller scale. At today's labor and overhead costs, it doesn't take long to show black figures with the much greater production rate per "hand" and the steady

hour-after-hour flow of clean, positively filled packages which you get with the right REDINGTON.

You may be surprised to learn how many different REDINGTONS have been developed to fit all kinds of standard and special requirements in all divisions of packaging. Send for our 32-page, fully illustrated catalog and see—and by all means, call in the REDINGTON engineers to discuss, without obligation, how our half-century of leadership in automatic packaging can help *you* produce better packages at better costs.

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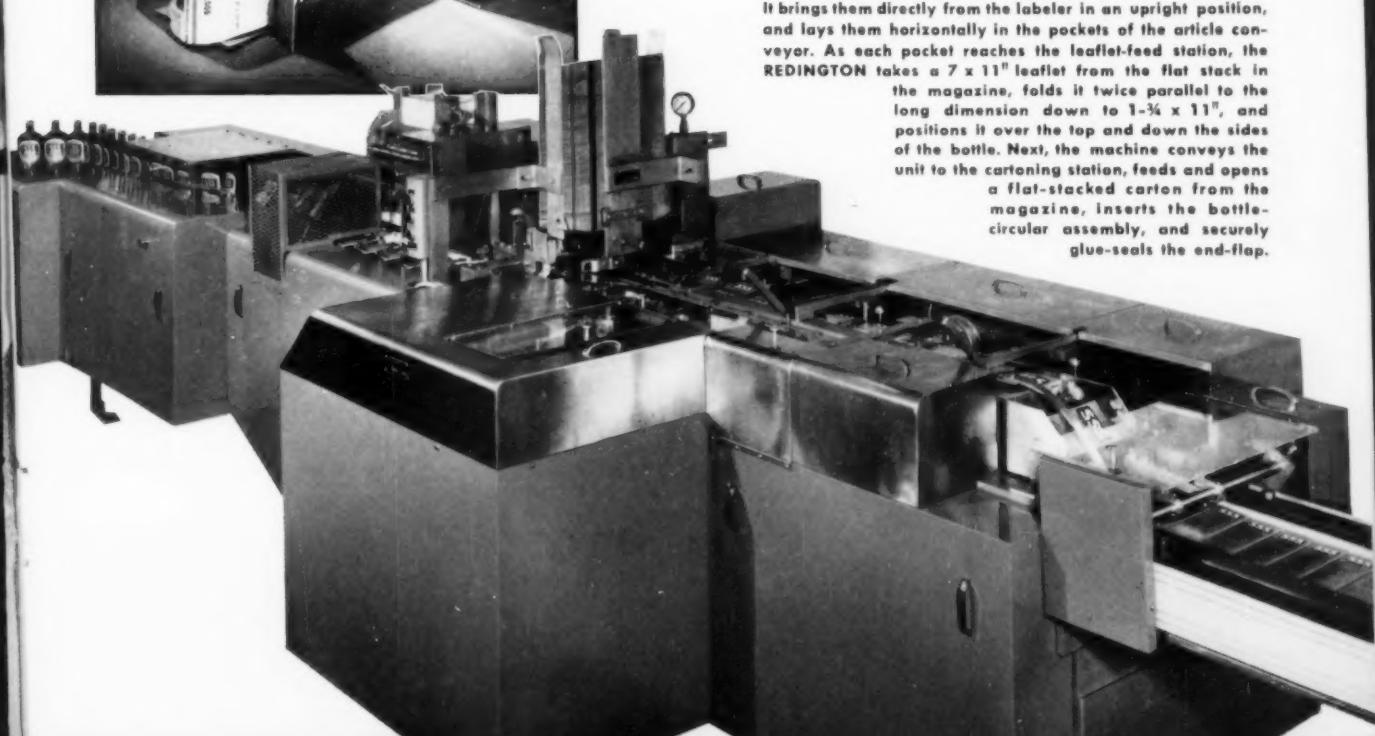
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The REDINGTON Type 24 handles two sizes of S.S.S. bottles. It brings them directly from the labeler in an upright position, and lays them horizontally in the pockets of the article conveyor. As each pocket reaches the leaflet-feed station, the REDINGTON takes a 7 x 11" leaflet from the flat stack in the magazine, folds it twice parallel to the long dimension down to 1-3/4 x 11", and positions it over the top and down the sides of the bottle. Next, the machine conveys the unit to the cartoning station, feeds and opens a flat-stacked carton from the magazine, inserts the bottle-circular assembly, and securely glue-seals the end-flap.



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MODERN PACKAGING is regularly
indexed in *Industrial Arts Index*.

MODERN PACKAGING

It takes time to be sure

IT'S NICE TO BE FIRST. Almost anyone likes to be the first to get a new product on the market, the first to come up with a unique packaging idea, the first to exploit a novel merchandising gimmick. The simple fact that it is "something new" often gives a tremendous boost to almost any sort of new idea—an initial sales bulge that competitors may never overcome.

But no one wants to be first with a *bad* idea. Rushing a package into public before it has been thoroughly tested may be disastrous, if some unsuspected flaw turns up after the product is in consumers' hands. Time that is gained by substituting the easy shortcut for the painstaking test is not worth much if some basic imperfection is overlooked.

Obviously this is nothing new to most thoughtful manufacturers. There have been too many widely publicized examples of new products that leapt into prominence with loud fanfare and then dropped with an even more resounding thud. Why? Because undiscovered defects suddenly cropped up that destroyed consumers' confidence.

Why do so many manufacturers, having carefully checked for every possible flaw in the product itself, so often fail to do the same for its container? Why do they get the product thoroughly tested and developed, the marketing arrangements set up, even the label design laid out and tested—and then, at virtually the last minute, expect the supplier to come up with a perfectly suitable container on a "rush" basis?

Functional container tests are seldom an overnight job. As three American Can Co. packaging technologists point out in an article in this issue (p. 140), adequate tests for so seemingly simple a thing as the proper can lining may take six months or a year. Only in this way can you be sure how a can and a product will react to each other during long storage periods.

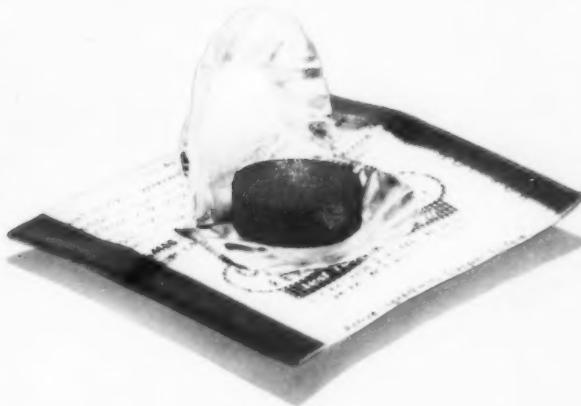
The obvious answer is to begin functional container tests as soon as a product's formula is set up. Container evaluation can and should go along side by side with all the other plans for product and package development.

The Editors





Dobeckmun creates...



solitary confinement for drugs with "escape" records!

Life-prolonging drugs themselves have a limited span of life. Dobeckmun's *Metalam*[®] foil puts them in solitary confinement that prevents escape of potency but permits easy release from outside. *Metalam*, "the flexible tin can", protects against moisture, air and light. So remember, sale and stale don't mix. If you have an ethical drug, cream, lotion, powder, pill or sterile dressing to merchandise, let Dobeckmun create a package for it that will keep your sales at peak performance. Dobeckmun is a specialist in packaging problems like yours. Write or call:



Dobeckmun Company, Cleveland 1, Ohio • Berkeley 10, Cal. • Wells River & Bennington, Vt.

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Meat tray overwrap — MSAT-80 Cellophane
 Vegetable bag — LSAT Cellophane
 Band — printed PT Cellophane

More than one ingredient goes into any successful package

It takes three essentials to produce a *selling* package—a package that catches the shopper's eye and tempts her to buy. Slanting a package to the likes and buying habits of the modern shopper—for instance, giving her the *convenience* of a ready-to-serve beef stew—is one important element. The other two are efficient package construction and choice of the

right film for the product.

You can count on Du Pont for help in developing a selling package—one that meets *all* these requirements. Get in touch with your Du Pont representative. For information on bags or printed materials call your converter of Du Pont packaging films. E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.

Why Du Pont is packaging-film headquarters

1. **WIDE VARIETY OF PACKAGING FILMS** scientifically tailored to meet the needs of varied products and packages.
2. **TECHNICAL** assistance to help you plan the most practical and efficient construction of your package.
3. **MERCHANDISING** help through continuing nation-wide surveys of buying habits, to keep your package up to date.
4. **NATIONAL ADVERTISING** to continually strengthen consumer preference for your packaged products.

DU PONT PACKAGING AND INDUSTRIAL FILMS

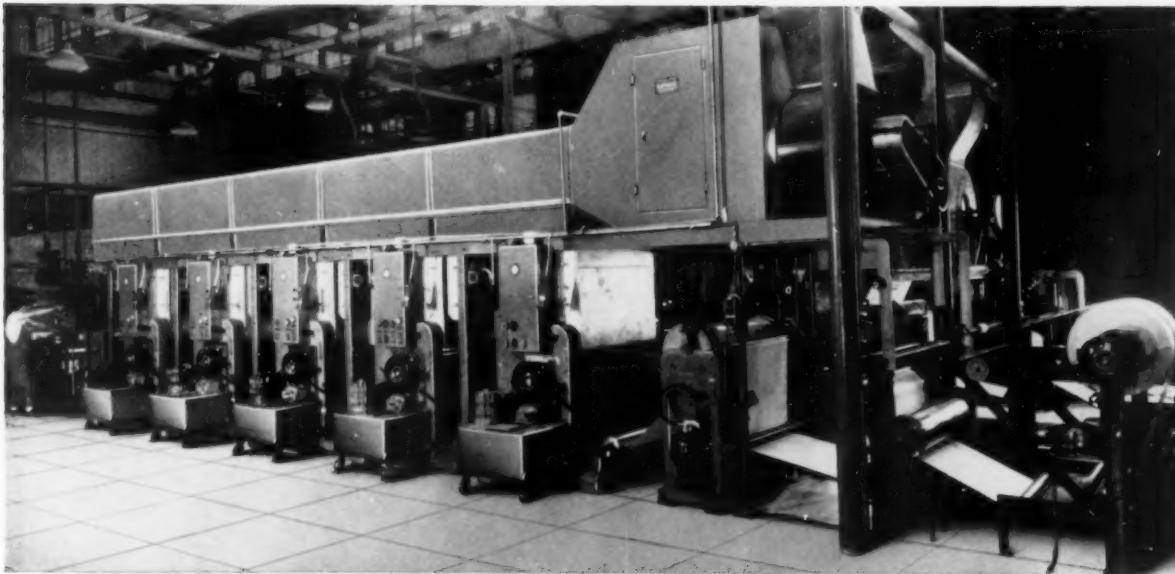
CELLOPHANE • POLYETHYLENE
 ACETATE • "MYLAR" POLYESTER FILM



BETTER THINGS FOR BETTER LIVING
 ... THROUGH CHEMISTRY

Staude "1000"

ROTOGRAVURE PRESS



COMPLETE INLINE EQUIPMENT FOR CARTONS . . . WRAPPERS . . . LABELS

- *Designed to run at 1,000 ft. per min. . . .*
- *Integral assembly for fast changeover . . .*
- *Printing width: 26" to 42" . . .*
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Heavy duty design . . . exclusive doctor blade mounting for easy accessibility . . . 360° running register . . . frictionless ball bearings used throughout . . . color units on individual bed plates . . . additional units easily added at any time . . . fast makeready changeover time. These are only a few of the features that add up to more profitable volume for your plant. A Staude representative can show you how you can improve plant efficiency with the "1000".

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New Outside... RIEGEL INSIDE



The outer design of cereal packages is often restyled for fresh, new "appetite appeal" ... but one part of the package has always stayed the same.

That is the Riegel inner liner ... a waxed special glassine that through the years has proven its ability to protect vital taste and crispness.

More than 600 other Riegel Papers are now serving the nation's best-selling brands. In this wide selection you may find a better paper for your product ... or we can "tailor-make" a new paper for you. Just tell us what you want paper to do. Write to Riegel Paper Corporation, P. O. Box 170, Grand Central Station, New York 17, N. Y.

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GLASSINES AND GREASEPROOFS

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ON THE MARCH...



... and improving
every day!

National Can is
building its future
on a solid
foundation of
customer satisfaction
and service.



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*The right paper
makes the label a
better salesman*



Your label, the vital link between the product and the sale, deserves the best—in design and in the paper on which it appears. Oxford label papers provide *extra* printing accuracy and greater production economies. That is why they are the accepted choice for many of the nation's leading products. Ask your Oxford Merchant to show you outstanding examples.

TWO VALUABLE AIDS. (1) *The new OXFORD PAPER SELECTOR CHART* is a time-saving master guide to the right grade for each purpose. (2) *The new OXFORD PAPER COST CALCULATOR* gives the exact cost per 1000 sheets for all common weights and sizes. Ask your nearby Oxford Merchant or write us direct.



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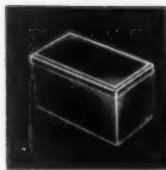


Letting the customer see and believe the freshness of these fancy nut meats was the job Tri-State rigid plastic packaging accomplished for the Blossom Peanut Co. of Cleveland. Mouths water when customers see crispy, crunchy cashews, pecans, Brazils through the crystal-clear box. They see how the tight-lidded rigid plastic seals in newly-roasted goodness like nothing else can.

Keeping the munch in nut meats is only one field where economical Tri-State protect-and-display packaging operates successfully. As molders of the world's largest assortment of rigid plastics, our packaging horizons are as limitless as the needs of your product.

The Freshness shows

in
TRI-STATE
show window
plastic
packaging



Tri-State No. 102F
4 $\frac{1}{2}$ " x 2 $\frac{3}{4}$ " x 2 $\frac{1}{8}$ " deep.



Tri-State No. 30F
4" x 5 $\frac{1}{8}$ " x 1 $\frac{1}{8}$ " deep.

Two of a huge variety of stock sizes and shapes, or we will mold large quantities to your specifications.



LOOK INTO



TRI-STATE PLASTICS

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FEBRUARY 1955

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KANSAS CITY: 502 Merchandise Mart, BALTIMORE 1800

DETROIT: 18401 E. Warren Ave., TUXEDO 5-5500

BEST
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XXXX's for the Cook



...with Pillsbury Quality Protected by
Reynolds Wrap Aluminum Packaging!

Luscious hot cinnamon rolls *from package to oven to table in 15 minutes...* this is the furthest advance in home baking. And it would not be practical without the packaging! Today's refrigerated rolls and biscuits require an extreme degree of protection against air, moisture and light rays. Yet the package must be economical, must sustain a 30-lb. internal pressure—and be easy to open. It's Reynolds Wrap Aluminum Packaging that meets these requirements for Pillsbury Quick Cinnamon Rolls. The cannister is lined with aluminum foil, wrapped full around with an aluminum foil label. It is airtight, moistureproof, lightproof, has ample strength and is easily opened with a knife. It keeps prepared rolls and biscuits in perfect condition, under refrigeration...ready for the oven.

If your product needs protecting, there is a type of Reynolds Wrap Aluminum Packaging that can do it best...and has sales-boosting eye appeal, too. For full information, call the nearest Reynolds Sales Office. Or write to **Reynolds Metals Company**, General Sales Office, Louisville 1, Ky.

Take advantage of this Powerfully Promoted Seal! Advertised monthly in full-color national magazine pages and weekly on Reynolds hit TV show "MR. PEEPERS," the Reynolds Wrap Aluminum Packaging Seal advertises Protected Quality on more and more packaged products.



Pioneers in Aluminum Foil Packaging.

REYNOLDS ALUMINUM

SEE "MISTER PEEPERS," starring Wally Cox, Sundays, NBC-TV Network.

BEST
XXXX



XXXX



8 UNBAKED ROLLS...READY FOR THE OVEN

Pillsbury

BEST
XXXX

NET WT. 8 1/2 OZS.

QUICK Cinnamon Rolls



8 UNBAKED ROLLS...READY FOR THE OVEN

Pillsbury

BEST
XXXX

NET WT. 8 1/2 OZS.

QUICK Cinnamon Rolls

DIRECTIONS

Preheat oven to 375° F.

To Open: Cut off either or both ends of can.

To Bake: Place rolls, scroll side up, 2" apart on lightly greased cookie sheet. Bake 12-15 min. Serve hot, plain or frosted.



Use Before Date Stamped on Package
REFRIGERATE—DO NOT FREEZE

Vanilla Icing: Blend 1/2 cup sifted confectioners' sugar, 1 tbsp. milk and 1/4 tsp. vanilla.

Orange Icing: Omit milk; add 1 tbsp. orange juice and 1 tsp. grated orange rind. Frost hot rolls. Top with nuts or cherries.

Mfd. by PILLSBURY MILLS, INC.
Gen. Offices, Minneapolis, Minn.
REG. U.S. PAT. OFF.

© P.M.I.

The product in this package (8 1/2 ozs.), prior to baking, contains not less than the following proportions of the minimum daily requirement: Vitamin B₁ 55%, Riboflavin 17 1/2%, Iron 40% and Niacin 5 mg. Made of enriched flour, sugar, shortening, leavening, non-fat milk solids, corn oil, spices, salt, artificial color and flavor.



"To capture the American taste you first catch the eye with smart, appealing packaging," says Mr. John H. Reddy, the New England Confectionery Company's dynamic Vice President in charge of merchandising. "That's why the window box stays high on our list of preferred packaging methods. It says more for the money to every shopper."

Are you merchandising your product's eye appeal to fullest advantage? Window boxes work wonders, especially when Celanese* Acetate is used to insure greatest transparency, sparkling freshness, resistance to

wrinkles and long shelf life . . . all at surprisingly modest cost.

Celanese Corporation of America, Plastics Division, Dept. 108-B, 290 Ferry Street, Newark 5, N. J. Canadian affiliate, Canadian Chemical Company, Ltd., Montreal and Toronto.

Celanese*

*Reg. U. S. Pat. Off.

PACKAGING FILMS

MODERN PACKAGING

AGAIN the choice is US



**Sterling Drug Inc. Installs US Model JK
For Filling ZBT Baby Powder Cans in New Jersey Plant**

**Sterling Drug Mfg. Ltd. Installs Model JK
For Same Operation in Ontario, Canada Plant**

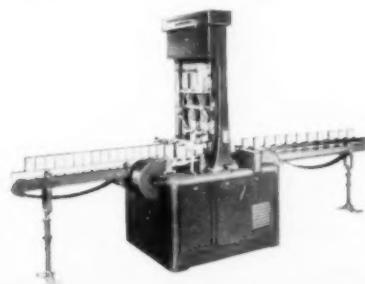
Sterling Drug Inc., manufacturers of ZBT baby powder, have used U. S. Automatic powder filling machines in their domestic plants for several years. Now they are using a U. S. Automatic Model JK automatic powder filling machine in their Sterling Drug Mfg. Plant at Windsor, Ontario.

The Model JK is a versatile twin station machine that fills with closest accuracy up to 60 containers per minute on all types of powdered and granular materials. Normally the operation of this automatic

machine is to fill by packing under controlled pressure; for those materials that require settling a vibrating filling platform is furnished.

Machine operators praise the efficient dust collector hoods at the filling stations and the shut-off gates that eliminate drip at the augers. Connected to a vacuum system these keep the surrounding air free of dust and make the filling operation absolutely clean.

Add to these features, ease of change-over to handle several sizes of containers and you have a machine that is the last word in modern-high-speed powder filling. Write **US** for complete details.



the Model JK Fully Automatic
Volume Filler, Weigher or Packer.

U. S. AUTOMATIC BOX MACHINERY CO., INC.

Owning and Operating NATIONAL PACKAGING MACHINERY CO. • CARTONING MACHINERY CORP.

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Branch Offices: New York • Chicago



Net and Gross Weighing
Package Forming and Filling
Carton Sealing, Lining,
Wrapping, Box Making

ARE YOU REPRESENTED
AT THIS
CONVENTION ?



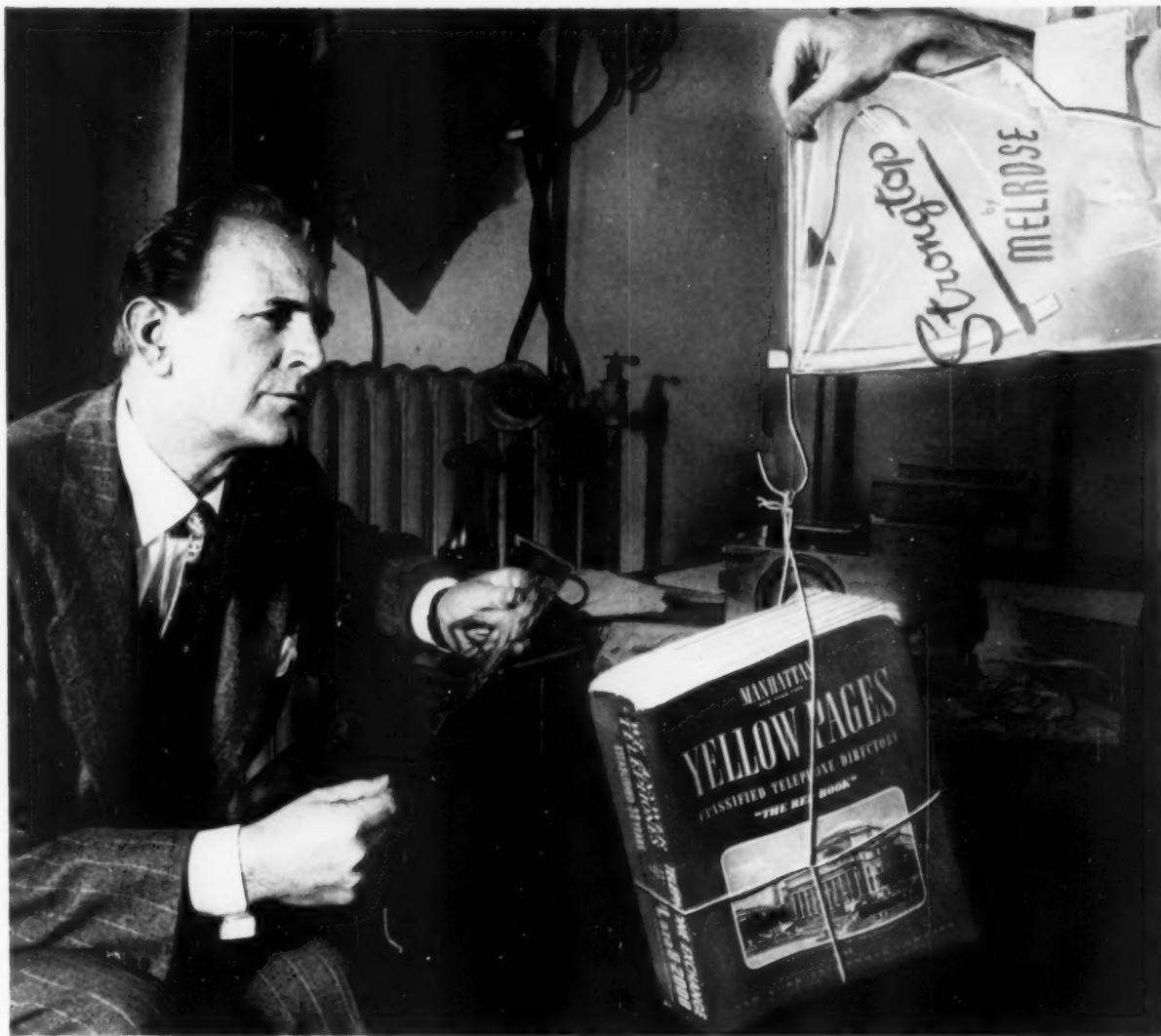
We will be glad to welcome you at our exhibit at the CANNERS' CONVENTION in Chicago from February 19th through 23rd.

Our representatives and experts from all parts of the country will be there and at your service.

This is an important convention, but not nearly so important as those daily meetings of consumers and dealers in stores all over the country. At H-A we never forget this. Every package is made not only for efficiency, but to sell your product.

H-A means HOME APPROVED





Test it...the cellophane bag that doesn't tear!

Strength where you need it most—at the top! That's the unique and exclusive feature of the STRONGTOP* cord-reinforced bag.

It's a blessing to packagers in many ways . . . cuts bag "casualties" on the filling line . . . looks trimmer and neater (lasts longer, too) on retailers' shelves . . . doesn't fall apart in the housewife's hands.

Note this! You can get the exclusive STRONGTOP* bag in glassine, paper and other flexible materials as well as in cellophane.

*Trade Name

FEBRUARY 1955

Free Sample Supply write for it now!

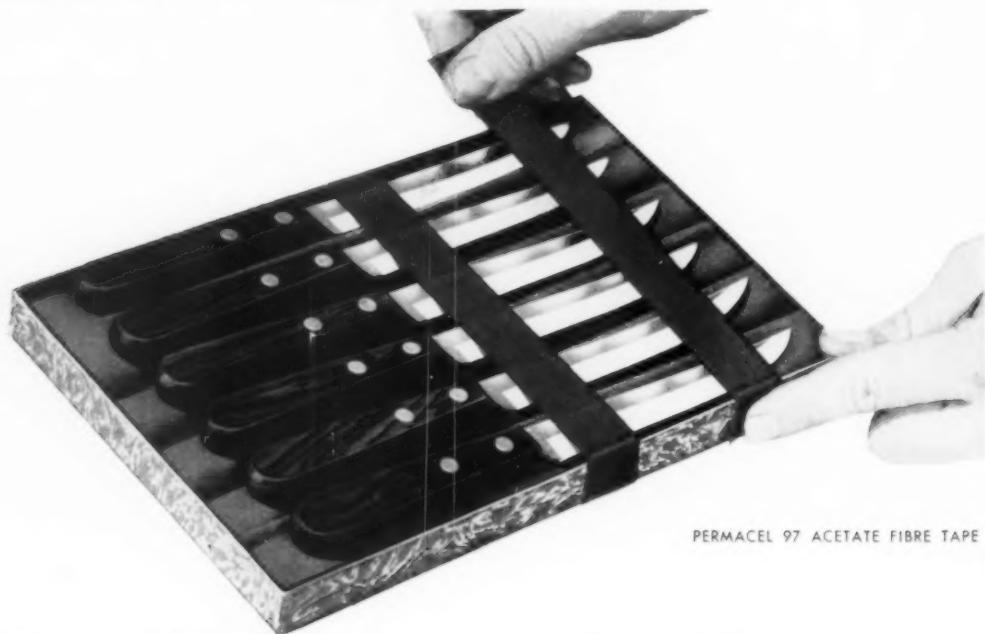
Test these STRONGTOP* bags on your filling lines. And be sure to try them on such "hard-to-bag" items as toys, dry foods, small hardware and many other "toughies."

MELROSE PACKAGING CORP.

814 St. Ann's Avenue, New York 56, New York



Whatever the job...



PERMACEL 97 ACETATE FIBRE TAPE

packaging or protecting



PERMACEL 64 CLOTH TAPE

SELF-STICKING PERMACEL[®] TAPES

In our complete line, there's a self-sticking tape for every job . . . write Permacel Tape Corporation, New Brunswick, N. J.

a *Johnson & Johnson* company



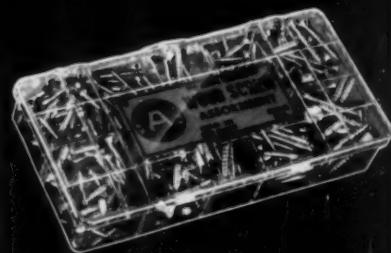
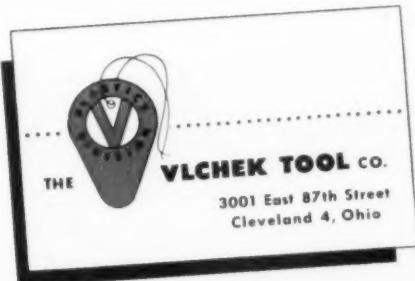
they would buy a pig in a plastic poke

Folks don't buy pigs in a poke today any more than they did back when the saying originated. But customers do buy products they can see—they buy 'em quicker in Vlchek Plastic Boxes.

Resourceful manufacturers who are farsighted merchandisers use Vlchek Boxes for both package and point-of-sale display.

Whether your product is a food, drug, or small mechanical part . . . whether it's hardware, cutlery, cosmetic, even soft goods, package it in plastic by Vlchek. Then watch the traffic troop to these transparent, tempting packages—and watch 'em buy!

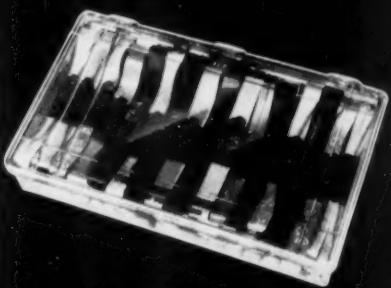
Vlchek Plastic Boxes both serve and sell the product for many companies, just as they have for these enterprising manufacturers.



Atlantic Screw Works, Inc., says, "This clear plastic box by Vlchek makes the best container yet for our assortment of wood screws—200 of them in 9 different sizes."



Carboloy (department of General Electric Company) shows and sells one of its products to excellent advantage in this container by Vlchek.



Glamorous gift wrap ribbons by American Greetings enjoy the protection of rigid transparent packaging in this striking point-of-sale merchandising box produced by Vlchek.

NOW!

A ROTOGRAVURE PRESS

that Delivers Sheets

1 $\frac{1}{2}$ Times Faster!



NOW—for the first time—you can take advantage of the high speed of modern rotogravure presses for label and wrapper printing. Improved Champlain Sheet Delivery—operating inline with a Champlain Rotogravure Press—delivers square-cut sheets with $1/64"$ accuracy **1½ TIMES FASTER THAN ANY OTHER STANDARD SHEETER!**

Standard Sheeter Sizes	Speeds*									
	Glossine & Paper Backed Foil		Label Paper		Heavy Paper & Cardboard		Max Width	Max Length	Min Length	
	Ft. Per. Min.	Sheets Per. Hr.	Ft. Per. Min.	Sheets Per. Hr.	Ft. Per. Min.	Sheets Per. Hr.				
20"	400	11,000	450	12,500	500 up	14,800	21"	26"	13"	
24"	400	8,300	500	10,500	600 up	12,500	28"	34"	17"	
36"	400	8,300	500	10,500	600 up	12,500	37"	34"	17"	
44"	400	8,300	500	10,500	600 up	12,500	45"	34"	17"	

ADVANTAGES?

Here are just a few:

For Rotogravure: high-speed precision-register printing on practically *any* stock in multiple colors—ideal for meeting the increasing demand for high-quality, high quantity wraps and labels for packaged products.

For Improved Sheet Delivery: greater production with inline economy.

PLUS

- **HIGH SPEED**...from 8,500 to 12,500* sheets per hour—chart at left shows full range.
- **ACCURACY**...cuts consistently square sheets to $1/64"$ or finer accuracy from any stock—any speed.
- **sheet PROTECTION**...exclusive individual sheet handling insures accurate jogging—undamaged front edges.
- **JAM-PROOF**...separate handling of each sheet with continuous individual movements acts as self-clearing mechanism—**DANGER OF TEARING, FOLDING, BUCKLING, OR COCKING IS PRACTICALLY ELIMINATED.**
- **NO WASTE TRIM**...easily adjustable to *any* sheet-width or length within the range of the press. This feature—plus consistent accuracy—produces sheets ready for the rear cutter.
- **VERSATILITY**...handles paper, board, foil, and most specialty stocks with equal ease.

Write today for catalog of Champlain press equipment and full information on Champlain Improved Sheet Delivery. Champlain Company, Inc., 88 Llewellyn Avenue, Bloomfield, N. J. Chicago Office: 520 N. Michigan Avenue, Chicago 11, Ill.

Champlain



Champlain manufactures a complete line of rotogravure, aniline, rotary letterpress and allied equipment for packaging and specialty printing.

PAPER WOUND
CANS-TUBES
CORES...

KEEP CONTAINER COSTS IN LINE WITH PROFITS



Where container costs have risen sharply, switching to paper wound cans, cores and tubes, produced on Knowlton machines, maintained profit margins.

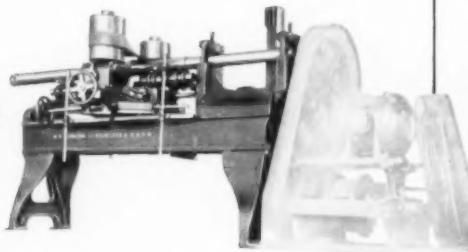
Paper wound containers have distinct sales, display and shipping advantages over the ordinary container. In addition, they give better protection of products in process, storage or transit.

Call a representative from the nearest Knowlton office, and he will tell you how other firms have used paper wound containers to cut costs.



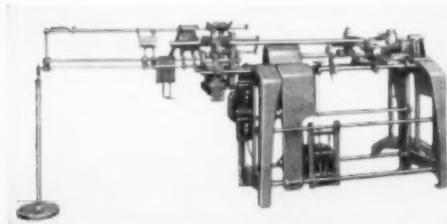
**AUTOMATIC
CONVOLUTE
PAPER CAN WINDER**

Winds paper can bodies from 1 1/4" to 8" in diameter on the round and from 1 1/2" to 8" across diagonal corners on irregular shapes such as square, rectangular, oval, etc.



NO. 4 SPIRAL TUBE WINDER

Winds paper tubes from 3/4" minimum diameter up to the following diameters according to the number of plies: 2-5 plies, up to 10" diameter; 3-11 plies, up to 8" diameter; 12-22 plies, up to 6" diameter. Can be furnished with cut-offs and glue stands to fit manufacturer's particular needs. Optional machines for cutting tubes in single or multiple lengths, rough or finished cores, or cutting light and heavy side walls up to 1/2" thickness.



**NO. 77 KNOWLTON SPIRAL TUBE WINDER
AND CUT-OFF** • Winds paper tubes from 2 to 5 plies and from 1/4" min. to 1" max. in diameter.

USES FOR CONVOLUTE AND SPIRAL WOUND PAPER TUBES AND CANS

CORES

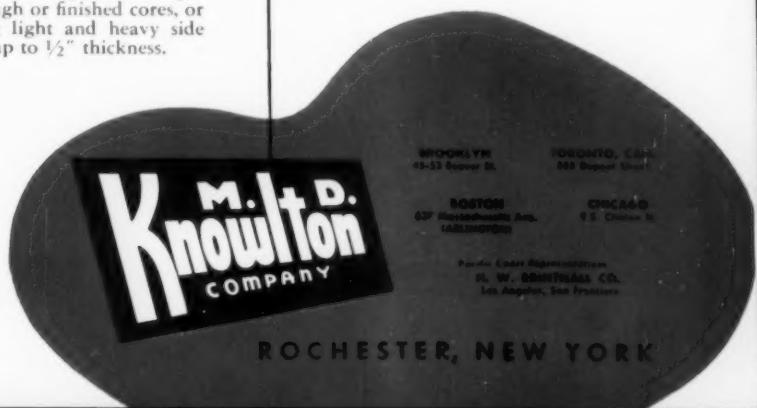
for Toilet and Towel Tissue, Paper Mill Rolls, Textiles, Gummed Tapes, etc., Hygienic Supplies.

CANS

for Household Products; Powdered Milk, Cocoa, Dry Cereal, Spices, Baking Powder, Salt, Popcorn, and other dry foods; Detergents, Cleaners, Medicinal and Pharmaceutical Supplies, Powdered Soap.

INDUSTRIAL AND COMMERCIAL PRODUCTS:

Automotive Parts, Machinery Parts, Manufacturing Supplies, Ammunition Containers, Military Supplies and Electrical and Radio Coils, Feminine Fancies; Cosmetics, Dusting Powder, Girdles.



*Made with the skill
that assures protection*



This 17th Century Gauntlet typifies the skillful craftsmanship of medieval armormakers. The expert positioning and attachment of adjacent parts permit all the necessary flexibility. The intricate carving and embossment give it a distinct, attractive appearance. And the careful design and workmanship assure the maximum protection. In battle and in jousts, combatants had to depend on the armorer's skill . . . often for their lives.

J&L Steel Containers offer dependable protection for your products. They're built of sturdy, high-quality J&L Steel Sheet. Their careful construction insures perfect fit of all joints and

movable parts. And they have a trim appearance which can be attractively decorated with colorful designs and illustrations by J&L's accurate lithographic process.

In addition, coatings and lacquers are evenly applied—both inside and outside; and every J&L pail and drum is chemically treated to keep all surfaces clean and dry.

For the protection your products need, depend on J&L Steel Containers. You can order them through plants in leading industrial centers, and you'll find J&L service prompt and efficient.



Jones & Laughlin
STEEL CORPORATION

405 LEXINGTON AVENUE
NEW YORK 17, NEW YORK

**J&L
STEEL**

MODERN PACKAGING

you don't have to hunt . . .



For most flexible packages the ideal material is at hand—no search is needed. VISQUEEN polyethylene performs superbly in more fields than any other film.

VISQUEEN is strong—won't split, crack, shatter or run.

VISQUEEN is uniform—yields more units per pound of film.

VISQUEEN won't block—keeps packaging lines at top speed.

VISQUEEN has body—packages are easily made, filled, closed.

VISQUEEN seals moisture in or out—indefinitely.

VISQUEEN is durable—even acids that eat metal won't touch it.

VISQUEEN thickness is identified—on invoices and rolls.

Further reasons why VISQUEEN outsells all other brands of polyethylene.

IMPORTANT: VISQUEEN film is all polyethylene but not all polyethylene is VISQUEEN. Only VISQUEEN, produced by process of U.S. Patents No. 2461975 and 2632206, has the benefit of research and resources of The VISKING Corporation.

Send me names of converters of VISQUEEN Film serving my area.

Company _____
Zone _____
City _____
State _____
Name _____
Address _____

Converters of VISQUEEN film are top experts in design and manufacture of flexible packages. Ask for names of those serving your area. Use the coupon.

Constance Bannister Photo

VISQUEEN[®]
polyethylene film

... a product of **THE VISKING CORPORATION**

Plastics Division, Terre Haute, Indiana • World's largest producers of polyethylene sheeting and tubing
In Canada: VISKING Limited, Lindsay, Ontario • In England: British VISQUEEN Limited, Stevenage

This advertisement is one of a series telling facts about VISQUEEN film.



tell
me
more!

SEAL-TAINER . . .



The Polyethylene Container that Rolls with the Punches



Using Cardboard Now?

Remember, Seal-Tainers give up to 100% area visibility to your products, not just a window. There's no breakage or spoilage of containers. Contents spilled during filling are readily wiped clear. And filling-line economies can offset the slight extra cost.



Using Glass Now?

Seal-Tainers are unbreakable, flexible, "see-through" containers at about one-sixth the weight of glass. Lower shipping costs and no breakage can more than offset the penny-a-package increase.



Using Styrene Now?

Why not save the cost of breakage? Non-rigid Seal-Tainer — the clearest molded polyethylene container on the market — gives excellent visibility to your product's color and texture. Seal-Tainers can be produced in all colors, and are easily labeled or printed. Hold frozen or warm foods and all kinds of materials, including "difficult" packs.

Drop a Seal-Tainer on hard concrete . . . it won't crack or break. Squeeze it out of shape . . . it snaps right back to its original form. Try to stain it . . . you'll find it wipes spotless, instantly.



That's why you never pay one cent for breakage or spoilage when you package your product in Seal-Tainer — the molded polyethylene container with the positive-locking no-drip lid. Valve-type action provides a bulldog grip between lid and container, gives spill-proof protection to every product.

Seal-Tainer — *the lowest-cost container in the unbreakable plastic field* — gives up to 100% visibility to your product. Re-use features boost impulse sales, create point-of-purchase stimulus. Seal-Tainers are available in all colors and in stock sizes from 6 to 64 ounces . . . and special sizes and shapes to your specifications.

Let a Plastomatic Representative help you with your packaging problems. Write today for full details.

Plan to Visit the
Plastomatic Booth No. 884
National Packaging Exposition
Chicago, April 18 to 21

SEAL-TAINER
TRADE MARK

PLASTOMATIC CORPORATION

MALVERN, PENNSYLVANIA



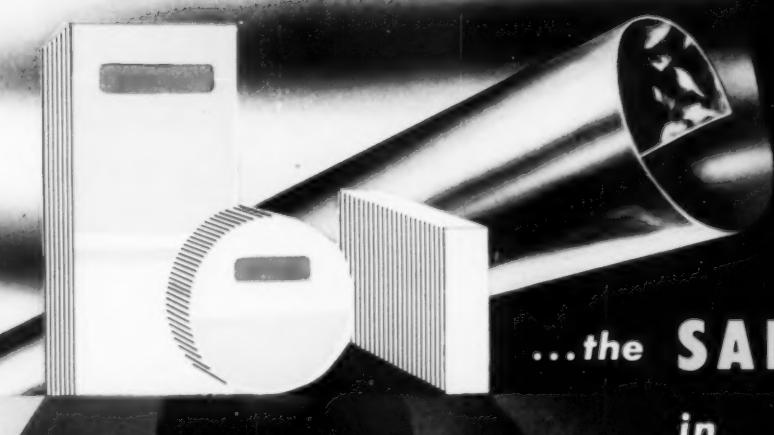
MODERN PACKAGING

PURE ALUMINUM

FOLLS

by

JOHNSTON



...the **SALES DYNAMIC**

in

**MODERN
PACKAGING**

What are YOUR Needs?

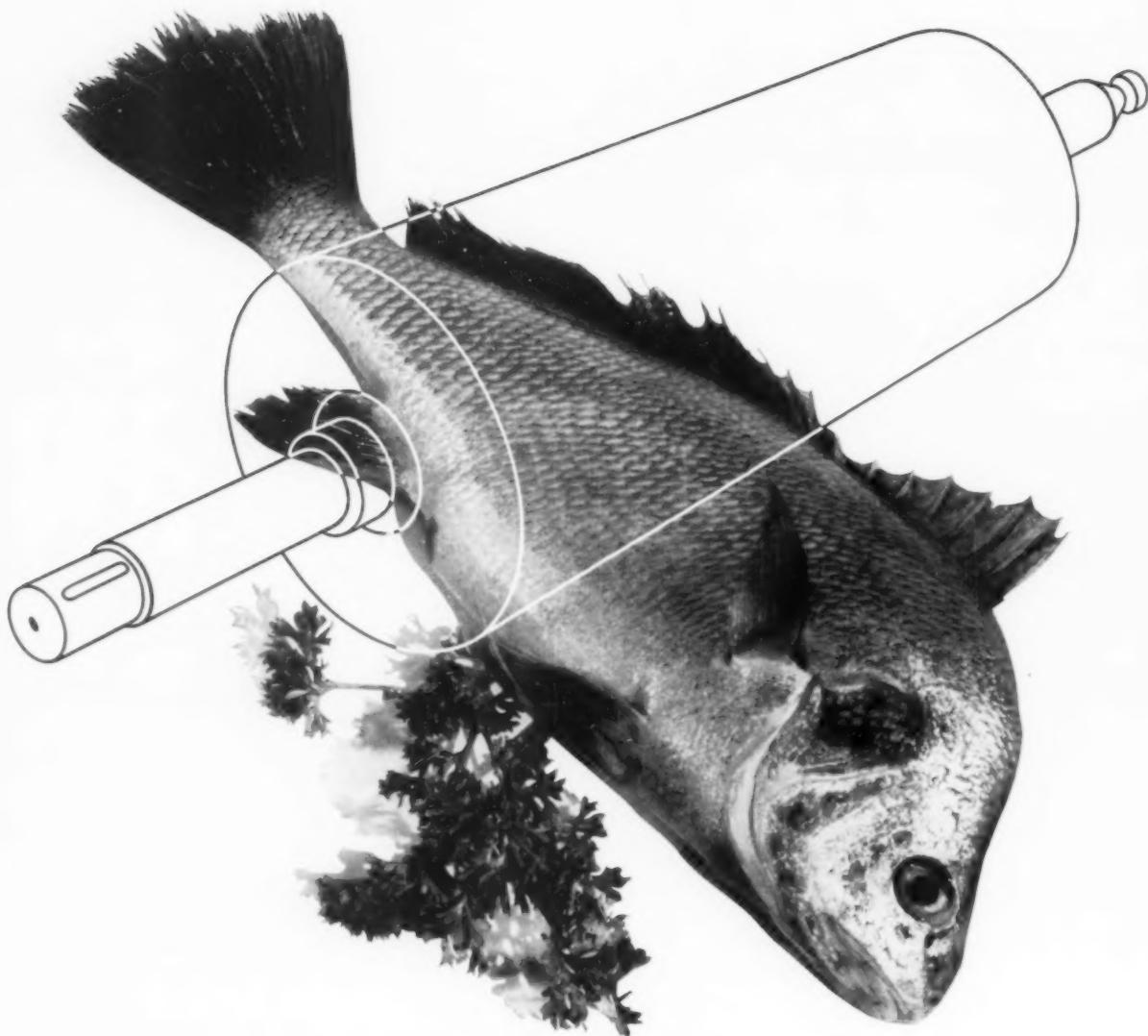
SINCE 1889

JOHNSTON FOIL MANUFACTURING CO.

6016-6296 S. BROADWAY
ST. LOUIS 11, MISSOURI

SALES
OFFICES

608 SOUTH DEARBORN CHICAGO, ILLINOIS
34 EXCHANGE PLACE JERSEY CITY, NEW JERSEY
633 SOUTH LA BREA AVE. LOS ANGELES, CALIFORNIA
7446 VINE STREET CINCINNATI, OHIO



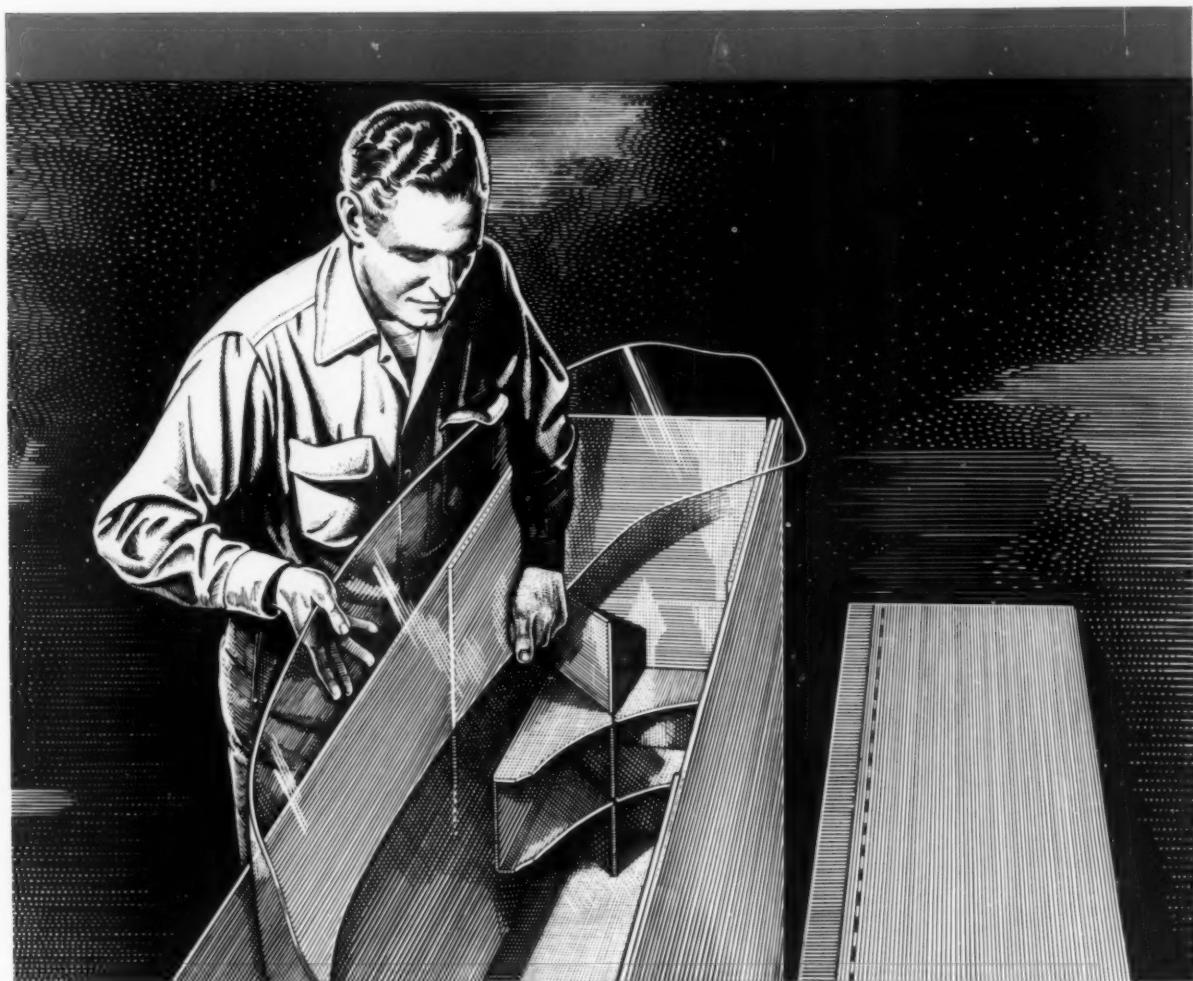
FROZEN FOOD Wrapper Appeal
depends upon lifelike color-matching

The pictorial quality and prescribed character of a wrapper is faithfully retained in every set of Beck-engraved rotogravure cylinders . . . Because Beck cylinders are made throughout with precision, you can expect perfect register with minimum set-up time and the clean, deep etch will produce uniform printing of superior quality . . . A Beck representative is thoroughly familiar with all phases of gravure engraving. Phone or write for service information.



ROTOGRAVURE CYLINDERS

The Beck Engraving Company • 105 South 7th Street, Philadelphia 6



WHAT'LL THEY THINK OF NEXT!



As your products change, so do your protection problems. You can imagine the hazards encountered in shipping this new-style "wrap-around" windshield glass. Gaylord solved the problem with a practical, efficient corrugated container.

Whatever shipping damage dangers your product may face, Gaylord engineering gives you these three important advantages: First, skillful design to fit your product's protection needs. Second, careful selection of precisely the correct weight and grade of box board from our wide variety. Third, rigid quality control throughout every step of box manufacture to assure you consistent strength.

At your nearby Gaylord sales office you'll find men who enjoy tackling unusual protection problems. Call them today!

CORRUGATED AND SOLID FIBRE BOXES • FOLDING CARTONS • KRAFT PAPER AND SPECIALTIES • KRAFT BAGS AND SACKS

GAYLORD CONTAINER CORPORATION ★ ST. LOUIS

SALES OFFICES FROM COAST TO COAST ★ CONSULT YOUR LOCAL PHONE BOOK

There's a **PLAX** Package with the ideal **DISPENSING** method for your product

You specify the action . . . fine, medium or coarse . . . spray . . . drop-by-drop . . . pressure or controlled pouring . . . direct application. In a Plax package, your product is dispensed exactly as it should be for maximum use convenience. More than 50 stock fitments to choose from. PLUS rainbow colors . . . lighter shipping weights that can save you hundreds of thousands of dollars . . . and the custom or stock shape that gives your product stand-out eye appeal. For packaging that makes your product easier to use, consult Plax.

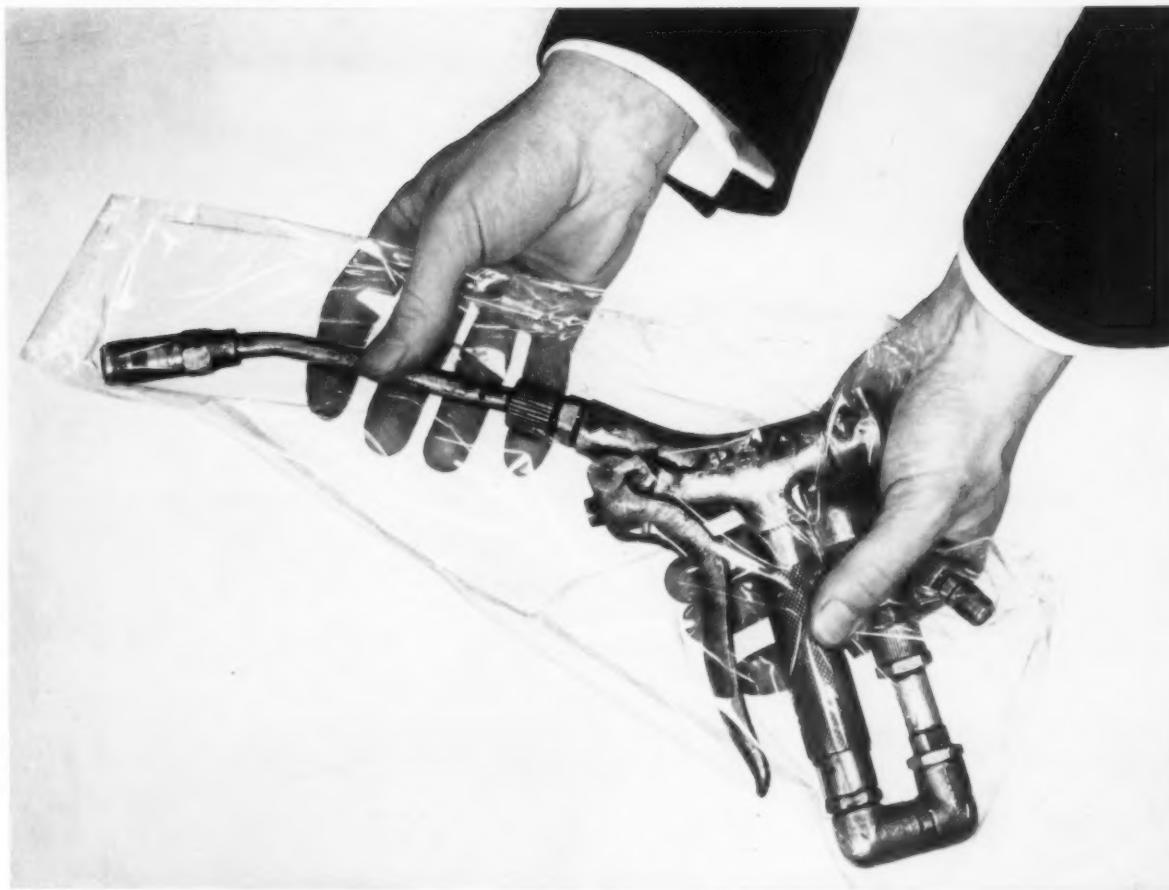
PLAX CORPORATION

P. O. Box 1019, HARTFORD, CONNECTICUT
IN CANADA: Plax Canada, Ltd., Montreal and Toronto



In plastic bottle packaging, only Plax offers continuous research, complete design service, and long experience.

PLAX



Packing a greasy number?

If you have a greasy product that's difficult to package attractively, here's your answer. You can wrap anything from bacon and doughnuts to oil-coated machine parts in PLIOFILM—without affecting the film—and without soaking through to soil the hands or clothing of shoppers.

Among transparent films this is a unique quality. But besides being greaseproof, PLIOFILM has other important advantages.

It has great dimensional stability, doesn't pucker

or wrinkle. It's moisture-resistant, keeps wanted moisture in, unwanted moisture out. Its transparency is clear and glare-free. It heat-seals with an airtight weld that's as strong as the package itself.

In short, there are a lot of things a PLIOFILM wrap can do for you. The Goodyear Packaging Engineer will be glad to help you design one specifically for your product. Write him at:

Goodyear, Packaging Film Dept. B-6418
Akron 16, Ohio

GOOD THINGS ARE BETTER IN

Pliofilm, a rubber hydrochloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio



*Made in Raleigh—sold in N. C.

Pliofilm
GOOD 
YEAR
PACKAGING FILM



everybody's happy ...

• **your production men**

Production lines keep rolling — no delays for lengthy label preparation, spoilage, or poor adhesion. Labels go on fast . . .

clean . . . easy — no water, no glue, no heat, no mess!



• **your dealers**

Pressure-sensitive labels stick tight on any hard, smooth surface. Regardless of heat, cold, or humidity, they identify your brand . . . tell your product story . . . help make sales.



when

you

use

• **your customers**

Buyers like these peel-off labels that won't "pop" or pucker . . . yet remove easily without soaking or scraping.

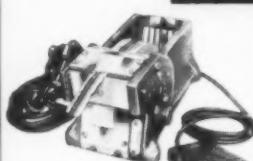


Special Roll Label Dispensers save time and money in every volume labeling application.

ROLL

DISPENSED

Pressure-Sensitive LABELS



**WRITE TODAY for
FREE
TEST-IT-YOURSELF
KIT**

Contains a selection of pressure-sensitive samples for on-the-spot testing in your own plant.

Your own Roll Label Printer is a specialist who can design and produce roll-dispensed pressure-sensitive labels that sell on your product or package. Any size . . . any shape . . . on almost any stock. Consult him on any of your labeling problems. He will be happy to cooperate.

KLEEN-STIK PRODUCTS, INC.

225 North Michigan Avenue • Chicago 1, Illinois

Pioneers in Pressure Sensitives for Advertising and Labeling

Looking for...



LOW COST HEAT-SEAL CELLOPHANE BAGS?

...then look to

Simplex

LOW COST INVESTMENT!

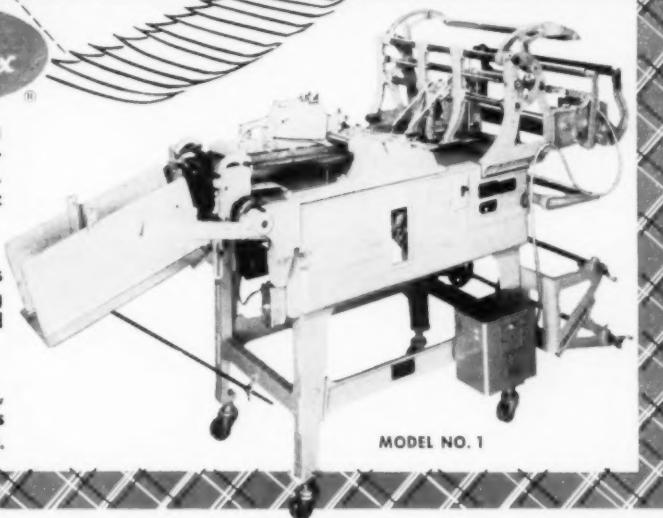
—Standard Simplex Cellophane Bag Making Machines, crimp or folded bottom, cost around \$2,000 (plain bags). Send samples or bag sizes for specific quotation.

LOW COST ATTACHMENTS!

—Exclusive, low cost Simplex attachments convert standard Simplex Cellophane Bag Making Machines to almost any desired bag making need.

LOW COST OPERATION!

—Simplex engineering assures automatic, high speed heat-seal bag production, less change-over time and reduced labor cost.



MODEL NO. 1

With low cost, exclusive attachments, one Simplex machine will do the work of several, including tear tape application, crimping, heat-seal labeling, etc. And the Simplex heat-seal action eliminates your gluing problems. Whatever your requirements—plain or printed stock, single or duplex walls, folded or crimp bottoms, cellophane, Pliofilm, glassines, heat-sealable foils or similar heat-sealing materials—look to the completely versatile Simplex Cellophane Bag Making Machines for the *low cost* answer to your high speed bag making problems. For new bulletin SPM-533, write to Simplex Packaging Machinery, Inc., 534 23rd Ave., Oakland 6, Calif., Dept. MP-2.

Check with Simplex for your bag and packaging needs... Other Simplex models for polyethylene bags... scrim and barrier bags and pouches... semi-automatic filling machines and top sealing machines... Simplex-O-Matic for automatic bag making, filling, weighing or measuring, and sealing. For details write to Dept. MP-2.

Simplex Model No. 1, Standard folded bottom bag machine costs about \$2,000, including installation (plain bags). Up to 4,000 heat-seal folded bottom bags per hour. Bag widths from 1½" to 9", lengths from 1½" to 16". Flat or tube, plain or printed stock, flat or gusset, single or duplex wall bags. Electric Eye and other attachments optional at extra cost.

FOREIGN SALES OF SIMPLEX PACKAGING MACHINERY, INC.

NOW HANDLED BY

FMC EXPORT DIVISION

P. O. BOX 760

SAN JOSE, CALIFORNIA, U. S. A.



SIMPLEX PACKAGING MACHINERY, INC.

534 23rd AVENUE, OAKLAND 6, CALIFORNIA

REPRESENTATIVES IN ALL PRINCIPAL CITIES

SUBSIDIARY OF FOOD MACHINERY AND CHEMICAL CORPORATION



LATEST DU PONT SURVEY REVEALS

Why retailers like to

HERE ARE THE FACTS AND FIGURES

Q. Why do you like to sell aerosols?

(Asked of the 1,517 dealers who said they do.)

Big demand, good seller	26%
Easy-selling item	24%
Profitable	20%
Easy for customer to use	14%
Easy to handle	11%
Good product	10%
Clean package, attractive, convenient	7%
No breakage or spoilage	7%
Easy to display	3%
Easy to demonstrate	2%
All other reasons	6%

NOTE: Total is over 100% because some gave more than one reason.

What this dealer acceptance can mean to a manufacturer

Aerosol packaging can help new products win the tough battle for initial distribution. Dealers gladly stock aerosols, because they know that aerosols hold a natural high-interest value, and that push-button convenience appeals to customers. For these same reasons, established products often find aerosol packaging a profitable sales stimulant.

Getting a product on the market in aerosol form is not a forbidding problem by any means. Du Pont will help you in every way possible, and can put to use its years of experience as manufacturer of the most widely used aerosol propellents—"Freon"** fluorinated hydrocarbon propellents.

Du Pont can help in many ways

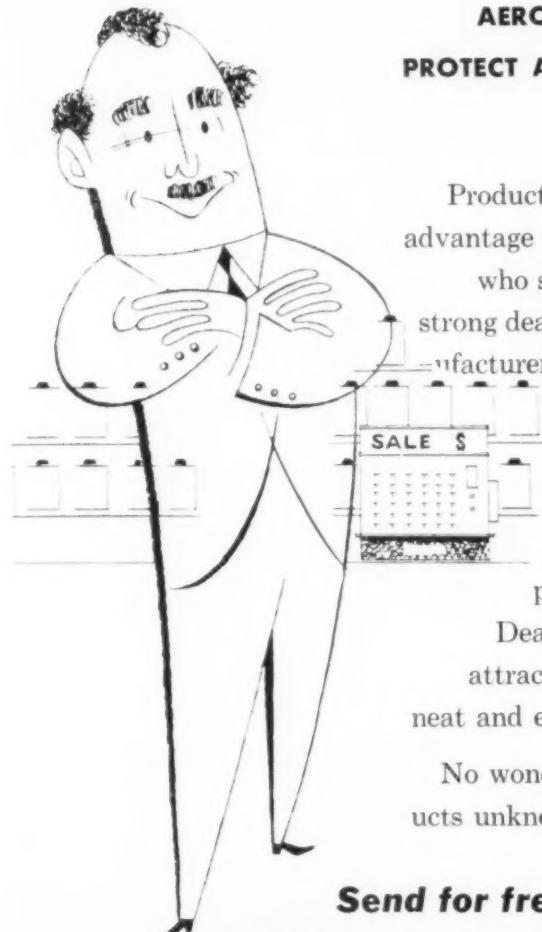
We can put at your disposal the facilities of Du Pont's "Kinetic" Chemicals Laboratory. Our experienced chemists will help develop formulations suited for aerosol dispensing, and can even help you set up your own aerosol lab for testing

and development. In the field of market research, Du Pont's annual surveys of the aerosol market give valuable information not available anywhere else. Du Pont can also help you contact valve and container suppliers, as well as contract loaders in your area who can do your aerosol packaging and save you the investment in equipment.

Du Pont "Freon" Propellents

Du Pont is in a position to help because of its unique experience as a pioneer in working with the aerosol industry. Years of know-how enable Du Pont to maintain the strict quality controls that have earned "Freon" propellents a reputation for pure, uniform quality. Manufacturers know "Freon" is safe . . . nonflammable, nonexplosive, virtually nontoxic. That's why the overwhelming majority of aerosol products sold are formulated with "Freon" propellents . . . the quality standard of the aerosol industry!

sell aerosol products



**AEROSOLS ARE CONVENIENT FOR CUSTOMER,
PROTECT AGAINST SPOILAGE AND BREAKING, ATTRACT
SALES — SO SAY THE DEALERS!**

Products that go to market in aerosol packages have a big advantage right from the start—almost *9 out of 10* retailers who stock aerosols favor them and like to sell them. This strong dealer acceptance is a valuable asset that any manufacturer should be glad to put to work for his products.

Retailers' attitudes toward aerosols are one facet of the aerosol market explored in Du Pont's 8th Annual Survey. Again and again the dealers' answers made clear the advantages of the aerosol package—the package that's *more* than a package.

Dealers told us that aerosol packaging protects, that it attracts attention and sales, that it makes customer use neat and easy.

No wonder aerosol packaging has grown so fast, and products unknown five years ago are million-dollar sellers today!

Send for free booklet with other survey findings

ANSWERS TO IMPORTANT QUESTIONS. The booklet "Spotlight on the Aerosol Market" contains interesting and important findings from the 1954 Du Pont Dealer Survey. You'll find answers to questions like:

- Q.** How do dealers rate aerosol products against competing non-aerosol products in attractiveness of packaging and labeling?
- Q.** How do dealers rate aerosol products as display items? Why?

MAIL COUPON FOR YOUR COPY TODAY

E. I. du Pont de Nemours & Co. (Inc.)
Room 11500 Nemours Bldg., Wilmington 98, Delaware

Please send me the booklet "Spotlight on the Aerosol Market." I am interested in aerosol packaging for _____.

Name _____ Position _____

Firm _____

Address _____

City _____ State _____

182

KINETIC

FREON
SAFE PROPELLENTS

*"Freon" is Du Pont's registered trade-mark
for its fluorinated hydrocarbon propellents.

DU PONT
Chemical Company

BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

Trojan FOIL

FOR EVERY PURPOSE

TROJAN

Laminates include:

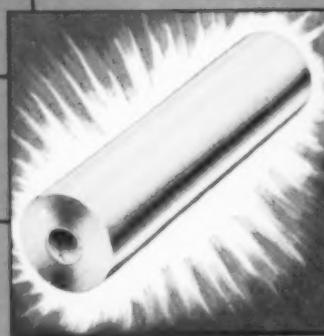
- FOIL PAPERS
- FOIL BOARDS
- FOIL CARD STOCK
- WRAPPING FOILS
- HEAT SEAL FOILS
- LAMINATED PAPERS
- LAMINATED FABRICS
- HEAT SEAL PAPERS
- LACQUERED NET FOIL
- GUMMED NET FOIL



Send for a Sample Book
A FREE copy of the Trojan Sample Book of Laminated Foils will be gladly sent upon request. WRITE TODAY.



TROJAN Foil Stocks include weights, finishes and colors that *exactly* meet the requirements of Seal and Label Printers, Greeting Card Manufacturers, Folding and Fancy Box Makers, Gift Wrap Converters and Novelty Manufacturers. TROJAN Foils are characterized by their fine printing, lithographing, embossing and die-cutting qualities. If you use foil laminated paper or board, in rolls or sheets, gummed or ungummed, you will find a TROJAN grade that is best for your purpose.



**The
GUMMED PRODUCTS
Company**

Main Offices and Mills: TROY, OHIO—Sales Offices: Atlanta, Chicago, Cincinnati, Cleveland, Los Angeles, New York, Philadelphia, St. Louis, San Francisco—Distributors from coast to coast.



CLEVELAND CONTAINERS

ADD SPARKLE TO YOUR PRODUCTS

GYPSY FIRE COLORED FLAMES, a fine product, was transformed from an ordinary package into an EXCELLENT package . . . with keen eye and customer appeal, added sturdiness and more economy in handling.

CLEVELAND CONTAINER'S designers and engineers are always available to suggest style improvements and solutions to your packaging problems.

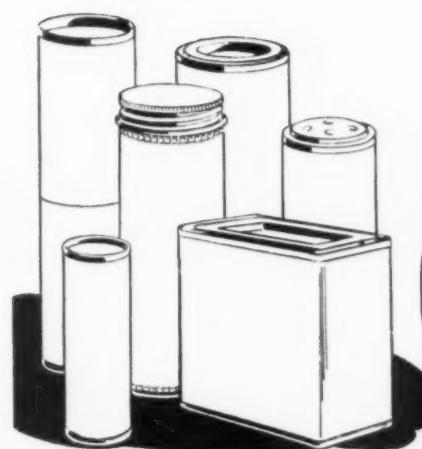


Cleveland Containers are furnished in eight basic types, in a wide range of styles and sizes, to easily permit new sales promotions.

Ask about our embossed closures, preprinted or decorative wrappers—that will give immediate individuality to your products.

Write the Cleveland Container plant nearest you
for our new Packaging Folder.

Why Pay More? For Good Quality . . . call CLEVELAND!



The CLEVELAND CONTAINER Co.

6201 BARBERTON AVE. CLEVELAND 2, OHIO

- All-Fibre Cans • Combination Metal and Paper Cans
- Spirally Wound Tubes and Cores for all Purposes

PLANTS AND SALES OFFICES: Cleveland, Chicago, Detroit, Memphis, Plymouth, Wisc., Ogdensburg, N. Y., Jamesburg, N. J., Los Angeles. ABRASIVE DIVISION at Cleveland. SALES OFFICES: Grand Central Terminal Bldg., New York City; Washington Gas Light Bldg., Washington, D. C.; West Hartford, Conn.; Rochester, N. Y. Cleveland Container Canada, Ltd. PLANTS AND SALES OFFICES: Toronto and Prescott, Ont. • SALES OFFICE: Montreal.



it pays to be

unusual!



IT PAYS TO HAVE the special equipment to get to the bottom of every problem . . . especially at the point of sale! It pays to be unusual with labels, packaging and displays that make a product irresistible even to the casual passerby! Almost 44 years of servicing a variety of clients have helped us perfect our different quality. Our 220,000 square feet of new plant houses the most modern lithographic equipment in America—and a staff with ideas! Could your point of sale strategy use a fresh approach? Call us—

we'd like to talk about it. . . .
No obligation, of course, just call . . .

Window, Counter or Merchandising Displays in Light, Motion or Dimension

LABELS • BROCHURES • CALENDARS • ANNUAL REPORTS
WRAPS • BOOKLETS • FOLDERS • POSTERS • TEXTURE FOLDERS

CONSOLIDATED

Lithographing Corporation

MEMBER OF THE POINT OF PURCHASE ADVERTISING INSTITUTE
Main Office and Plant at Carter Place, L. I., N. Y.
Sales Offices in Philadelphia, Chicago, Louisville, Tampa

NATURE GIVES US A HAND

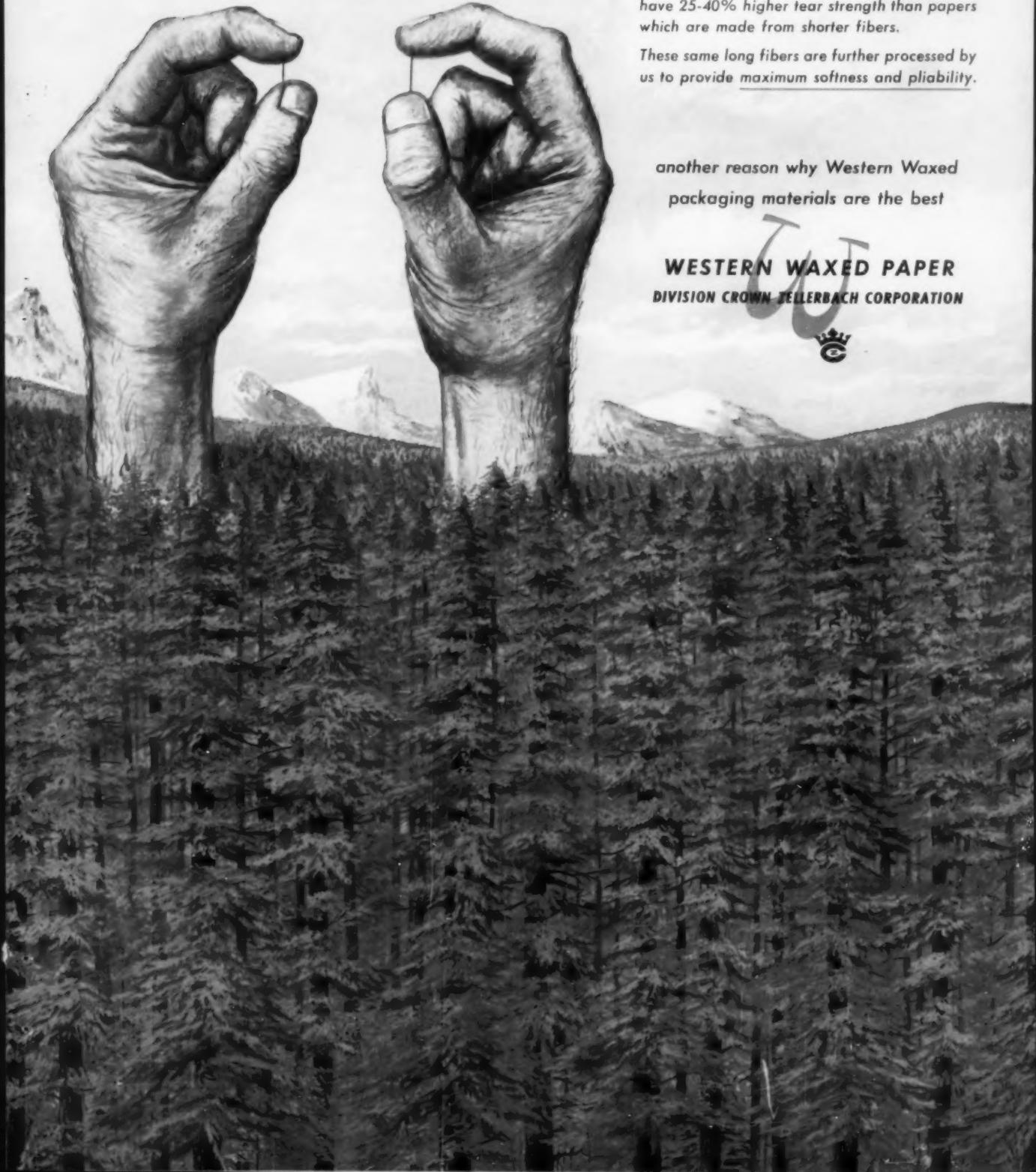
Mother nature has provided us with the largest source of Western long fiber paper pulp from Crown Zellerbach's tree farms.

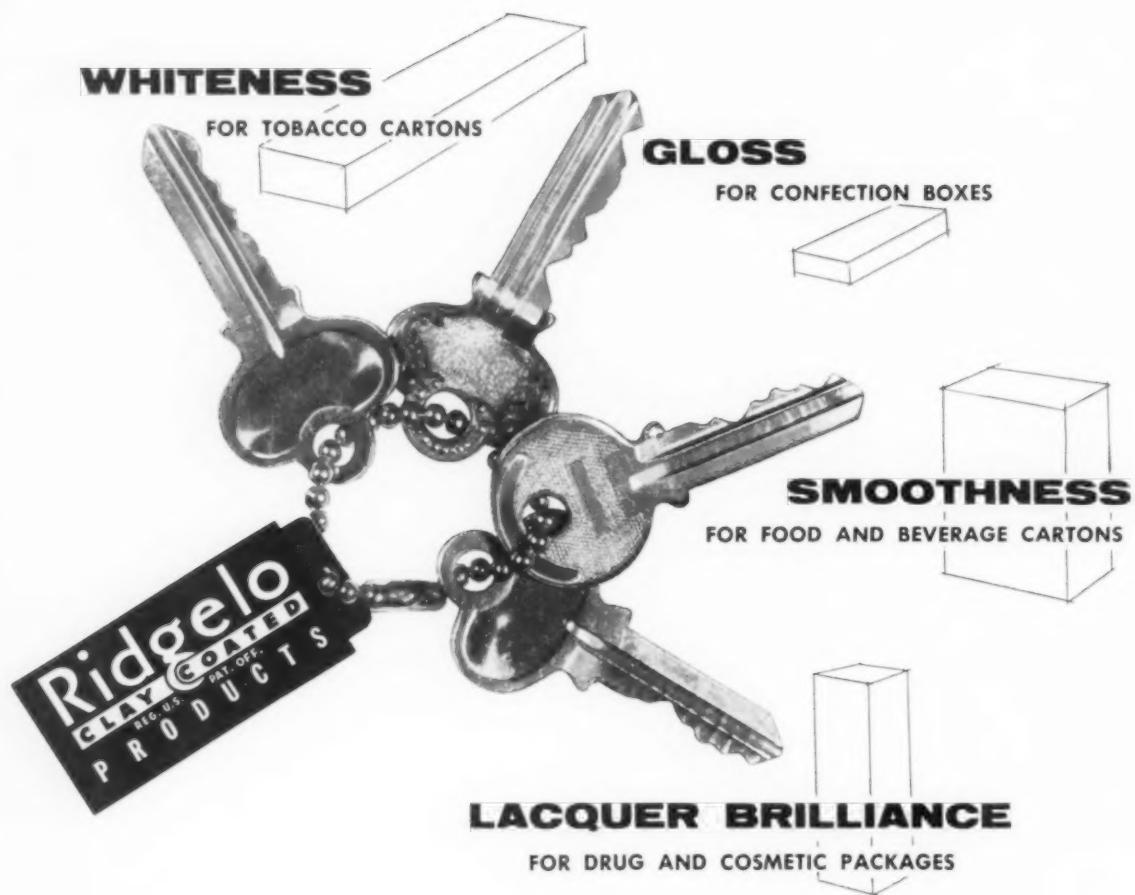
These long fibers are used exclusively in all our packaging papers to provide the toughest wrapers. Laboratory tests and actual customer use prove that Western Waxed packaging papers have 25-40% higher tear strength than papers which are made from shorter fibers.

These same long fibers are further processed by us to provide maximum softness and pliability.

another reason why Western Waxed packaging materials are the best

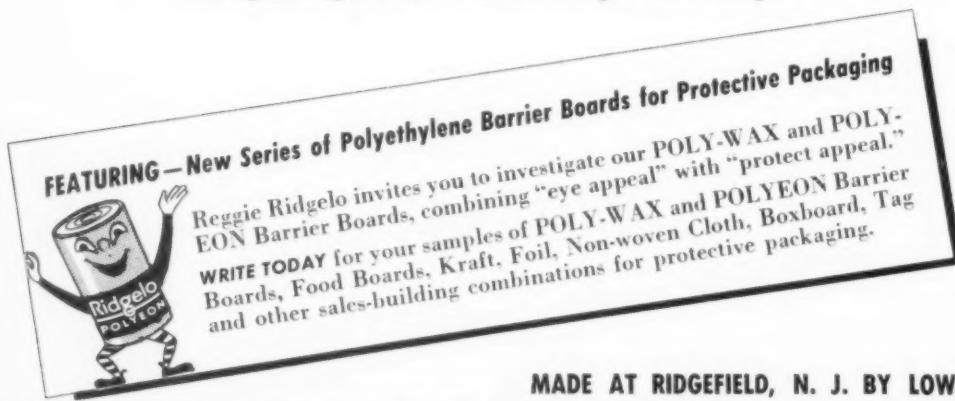
**WESTERN WAXED PAPER
DIVISION CROWN ZELLERBACH CORPORATION**





New Keys to Quality Boxboard Needs

Many standards for many uses are obtainable now in Ridgelo Clay Coated boxboard. For the first time, the Ridgelo line covers a wide range in brightness, value, and in price. Whatever the product, carton design or method of printing, there is a boxboard specifically made for the purpose . . . special coated, standard coated (machine), custom coated, brush finish, double brush finish, ultragloss (glazed). Ask for samples and compare.

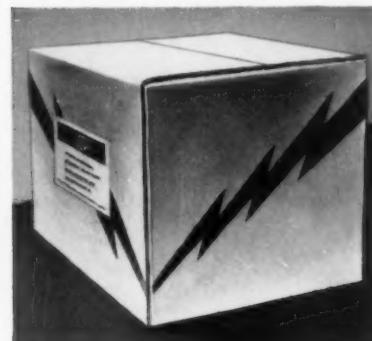


MADE AT RIDGEFIELD, N. J. BY LOWE PAPER COMPANY

REPRESENTATIVES • Detroit - H. B. Royce • Philadelphia - Philip Rudolph & Son, Inc. • St. Louis - A. E. Kellogg • Los Angeles - Norman A. Buist



Adhesives for better packaging



NEATER, STRONGER, SNAG-FREE BOXES result when the manufacturers joint is glued with DAREX Resin Emulsion Adhesive. Other advantages are that these boxes are sift-proof and weather-resistant. Ask your box-maker about Glue-lap Boxes!



"TOPS" FOR CASE BOTTOMS is DAREX Resin Emulsion Case Sealing Adhesive. It is widely used by leading breweries to prevent case bottoms from giving way even when they're soggy or wet. Applied by standard case-sealing machines.



IF YOU USE wet strength, coated or highly calendered papers for specialty and multi-wall bags, try better-bonding, moisture-resistant, high-solids DAREX Resin Adhesives. Better quality, higher speeds can result, without increasing your unit costs.

Cambridge 40, Mass. • Chicago 38, Illinois • Montreal 32, Canada • San Leandro, California



**SERVING MID-AMERICA
FROM 14 CONVENIENT CITIES**

**Central
Fibre** PRODUCTS COMPANY
(INCORPORATED)

PAPERBOARD MATERIALS

CORRUGATED SHIPPING CONTAINERS

CORRUGATED SPECIALTIES

FOLDING AND SETUP BOXES

PRODUCE HOUSE SUPPLIES



CHICAGO, ILLINOIS
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OMAHA, NEBRASKA
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SALT LAKE CITY, UTAH
ST. LOUIS, MISSOURI
TAMA, IOWA
URBANA, OHIO
VINCENNES, INDIANA
WATERLOO, IOWA

This single service pouch bag seals detergent in—prevents caking!

It has a
heat-sealed,
moisture-resistant
coating of Du Pont
ALATHON*
polyethylene resin



Paper coated by Riegel Paper Corporation, New York, N. Y.

For people on the go, Tussy offers de luxe Jalma laundering compound in individual envelopes, which are easily carried in a suitcase or overnight bag. But selecting the right packaging material was a problem: what material would (1) stand the rigors of travel without allowing the fine powder to escape, and (2) prevent moisture from seeping through, causing undesirable caking?

Meeting all requirements, Riegel's Poly-Pouch, coated with .0007" of "Alathon," was selected. It provides a *lasting seal* and *moisture resistance*. Now

the detergent stays dry and powdery for best results . . . and the package takes roughest travel without any loss of detergent.

Perhaps the unique properties of coatings of Du Pont "Alathon" will solve your packaging problems. Easily applied to paper, film or foil, "Alathon" stays tough and flexible throughout a wide range of temperatures—from tropic heat to -100°F. It is tasteless, odorless and non-toxic . . . and resists most acids and alkalies in addition to greases and oils. For more information, just mail the coupon below.

*REG. U. S. PAT. OFF.



Which type of
package are you
interested in?

- Multi-wall bags
- Single-ply bags
- Pouch bags
- Board cartons
- Board trays
- Fiber drums
- Corrugated boxes
- Fiberboard containers

E. I. du Pont de Nemours & Co. (Inc.)
Polychemicals Dept. 512, Du Pont Bldg.
Wilmington 98, Delaware

Please send me information on the properties and advantages of coatings of "Alathon" polyethylene resin.

Name _____

Title _____

Company _____

Address _____

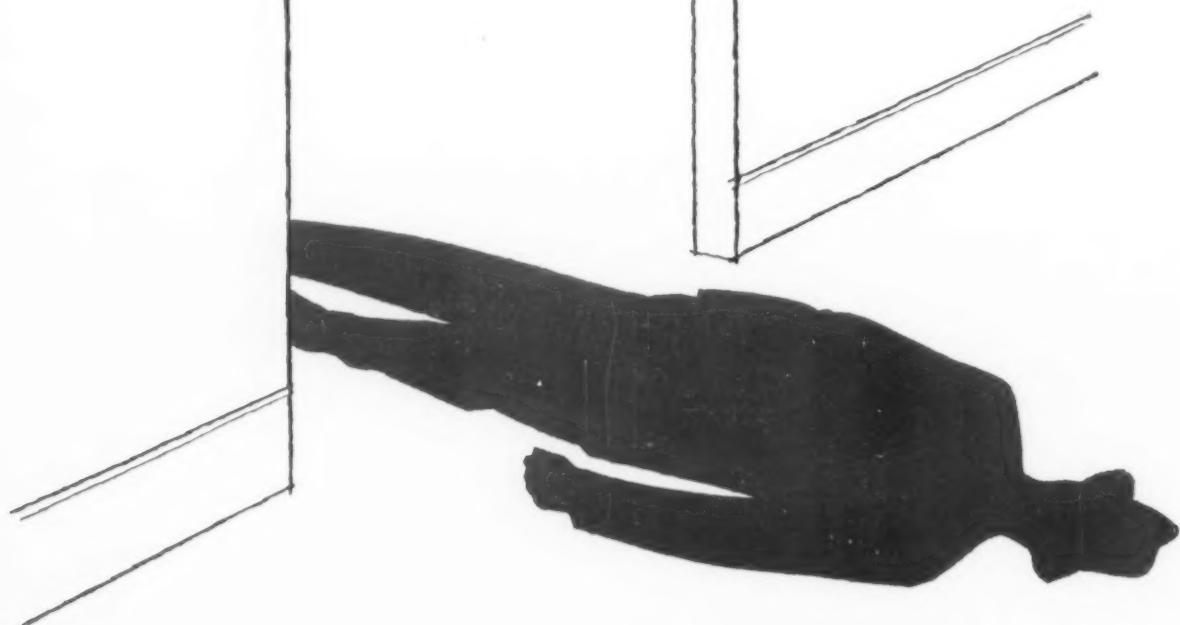
City _____ State _____

On January 24, 1935...

this container opened



How a new container
opened up a whole
new market for the
brewing industry...



doors for everyone!

On January 24, 1935, beer and ale first began to go to market in a revolutionary new container developed by the American Can Company—the can trademarked "*Keglined*." This container was the original can for beer and ale.

Its introduction twenty years ago started a new trend in packaging of beer and ale for use in the home.

It allowed the brewer to package beer conveniently and economically in a really practical container for the first time.

It gave the distributor an easier and lighter package to handle, and one which took less space.

For the retailer, it solved at one swoop the problems of shelf space, breakage, storage room and deposits.

The consumer found the can trademarked "*Keglined*" was lighter to carry, needed less refrigerator space, eliminated deposits and returns.

This is just another example of Canco pioneering in the development of new containers designed to bring *your* products more efficiently, more economically to more people.

Go first to the people who are first!

American Can Company



New York, Chicago, San Francisco; Hamilton, Canada

SEALED UNTIL SOLD



When liquid goes into a bottle which is capped by an R.O. Pilferproof Seal it is safe until it is sold. In transit or in store, tampering is discouraged. The moment the Pilferproof Seal is broken a 'tell-tale' ring drops down the neck of the bottle. Because of this security, as well as its attractive appearance and its made-to-measure fit, the R.O. is the perfect seal for bottles and jars.



METAL CLOSURES LTD · WEST BROMWICH · STAFFS

ENGLAND

If you have a packaging problem---



A & S has the Answer!

If you are looking for top-flight designing, quality printing, laboratory-controlled production, A & S has it, plus three generations of skilled "know-how". Functional design and consumer sales-appeal are wrapped up together by ARKELL & SMITHS Packaging Engineers. And the proper material is always selected to do the job best.

Each product has its own personality. The A & S Flexible Packaging Division — which offers a complete line of stock and custom packaging materials — is prepared to deal with your special problem.

When you buy from ARKELL & SMITHS, you buy experience and imagination!

ARKELL and SMITHS

PLAIN or PRINTED

BAGS	ENVELOPES	WRAPS	ROLLS
pliofilm	acetate	foils	polyethylene
		glassine	cellophane
		• specialty papers	kraft

Bag Making Plants at: Canajoharie, N. Y. • Wellburb, West Virginia • Mobile, Alabama • Hudson Falls, N. Y.

Sales Offices in all Principal Cities.

EXECUTIVE OFFICES: 500 FIFTH AVENUE, NEW YORK 36, N. Y.



NIBROC® WHITE PAPER

gives you a whole bag of selling tricks!

Bags made with Nibroc White sell like magic because they're...

EYE CATCHING! The product in a Nibroc White bag is the one that catches the eye of the housewife in the modern supermarket.

BRIGHTER! It's easier for your customer to sell the merchant his flour, rice, coffee, meal, dog-food

in a bag printed on high-brightness Nibroc White.

STRONGER! Exceptionally tough and highly flexible, Nibroc White gives the product greater protection... guarantees its safe-and-sound delivery.

Use Nibroc White. Pass on these selling tricks to *your* customer—and to *his* customer. Write our

Technical Service Division,
Dept. RD-2, Boston.

BROWN QUALITY

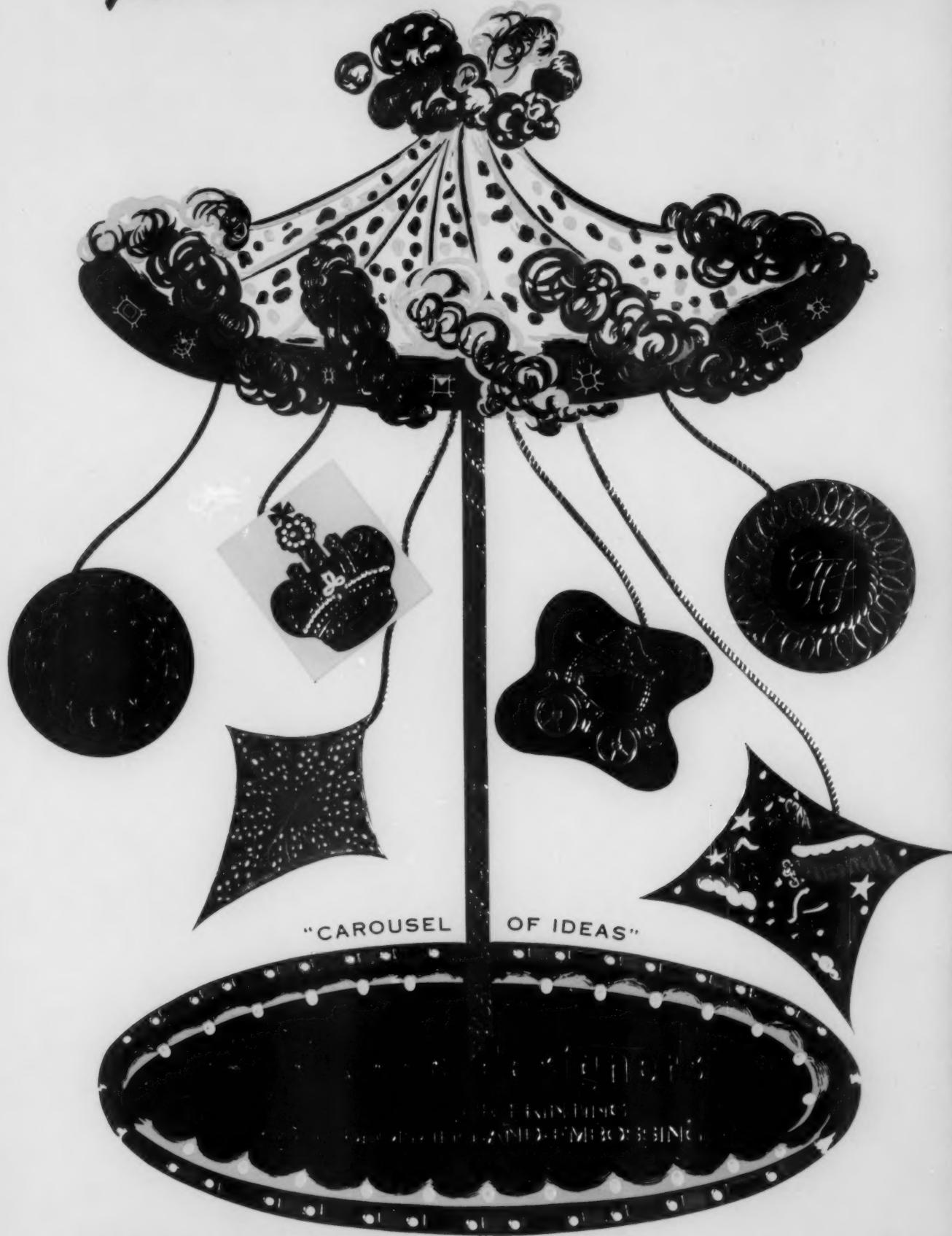
COMPANY, Berlin, New Hampshire
General Sales Office:

150 Causeway Street, Boston 14, Mass.

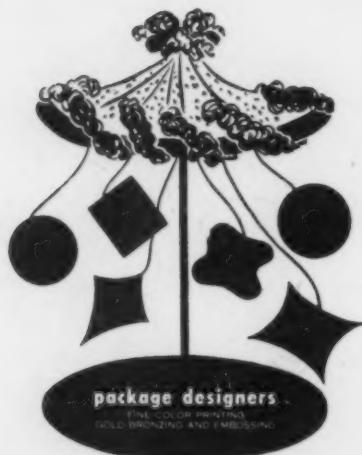
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PAPERS • NIBROC TOWELS • NIBROC KOWTOWLS
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MODERN PACKAGING

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“Carousel of Ideas”

Illustrates the exciting use of color reproduction and embossing techniques

“Old in Experience” and new in ideas

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CREDITS:

ART DEPARTMENT AND STAFF
COLOR DIVISION
PRODUCTION DEPARTMENT
EMBOSSING DEPARTMENT

the finishing
touch...

It's the little touches of
individuality that point up character—add
refinement—make either a person or
product memorable.

That's why so many bottlers use
colorful, protective Sylvania Bands.

They enhance appearance—
highlight trade-marks, slogans, brand
names—protect tax stamps—
are surprisingly inexpensive.

For suggestions showing how
Sylvania Bands can add interest to
your product, simply send us one
of your empty labeled bottles.



Monastery Peppermint Schnapps, bottled by
National Cordial Co., Inc., Chicago,
topped with an attractive Sylvania Band.

SYLVANIA BANDS

SYLVANIA DIVISION, AMERICAN VISCOSÉ CORPORATION, 350 Fifth Avenue, New York 1, N.Y.

FEBRUARY 1955



Durethene

the real answer to PERMANENT
PRINTING on Polyethylene Film ~ ~



NO MORE OFFSET, FLAKING OR RUBBING OFF

You can be sure of brilliant, permanent printing that "stays put" during the whole life of your package, without cracking, flaking, rubbing off or smearing during shipping or shopping. DURETHENE CORPORATION's new, exclusive *Permatreated ION-FILM* is preprocessed to "marry" the printing inks to the surface of the Film, by overcoming the chemical resistance which has long plagued converters when working with improperly treated Film.

DURETHENE *Permatreated ION-FILM*, now in Converters' hands, is available in all widths of Tubular Film, for making either plain or gusseted bags. And remember this, too: DURETHENE Polyethylene Film makes the *strongest* bags you can get—cuts down sealing and handling problems because it is rigidly held true-to-gauge throughout every roll—is available from leading Converters throughout the country. Write for the names of DURETHENE Converters nearest you.

Thousands of yards of DURETHENE Permatreated ION-FILM have been processed by Converters throughout the country in the last year and a half. Their reports have been unanimous: NO more trouble!



Durethene Film—STRONGEST For Drum, Box, Bag Liners
For weight-reducing, moisture-proof, chemical-resistant liners that protect product quality and cut shipping costs, major packers of lard, powdered and granulated foods, chemicals and other products are specifying DURETHENE Polyethylene Film Liners, plain or colored—made in widths up to 41" and in all gauges.



Durethene
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Manufacturers of Polyethylene Film
for Converters

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NEW YORK OFFICE: 175 FIFTH AVE., NEW YORK 10, N. Y. • OREGON 3-2419

• Sales Offices in
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NOBODY HAS AS MUCH EXPERIENCE AT MOLDING POLYETHYLENE AS

TUPPER!

The logical molder for you to consult regarding that product or package of yours which is to be made of polyethylene is Tupper. Tupper has done more than any other molder to make molded polyethylene a practical reality.

Aside from having designed, patented, and promoted successful seals, closures, and dispensers for polyethylene containers, the Tupper Corporation has vast experience in every phase of polyethylene packaging and polyethylene injection molding. This experience will be of major importance in improving your product, in reducing your costs, when Tupper goes to work for you.

Tupper's combination of experience, technical ingenuity, and the most modern equipment is at your service for the custom molding of your product in polyethylene. You can do no better than the best ... and the best at molding polyethylene is Tupper!

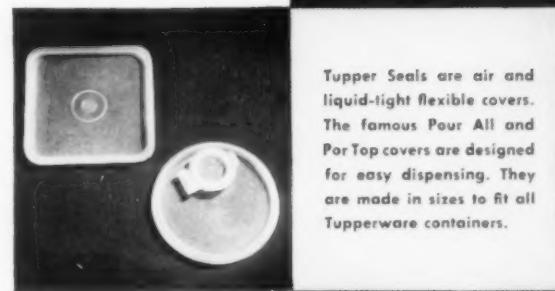
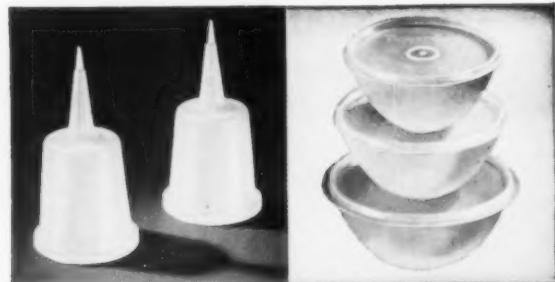
TUPPER!
TRADE MARK

TUPPER CORPORATION

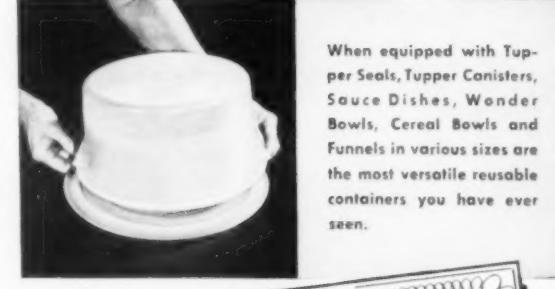
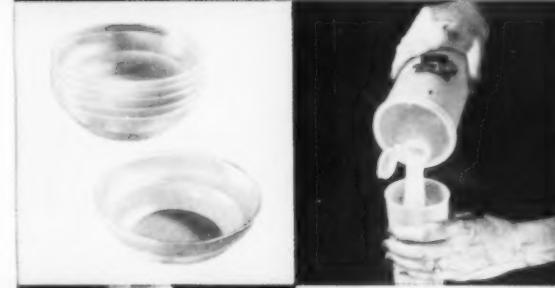
*Manufacturers of — CONSUMER, INDUSTRIAL,
PACKAGING AND SCIENTIFIC PRODUCTS*

*Factories, Laboratories and Sales Offices:
Farnumsville, Mass., Blackstone, Mass.
Orlando, Fla., Montreal, P.Q.
Showrooms: 225 Fifth Ave., N. Y. C.*

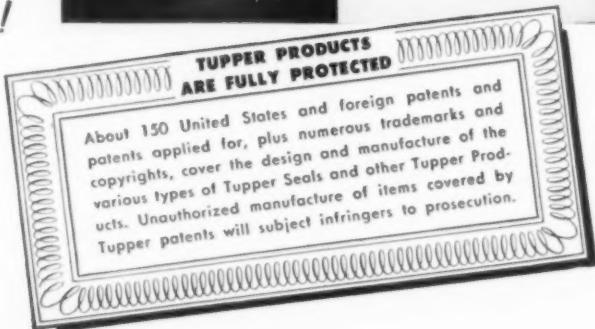
Address all communications to: Dept. MP-2



Tupper Seals are air and liquid-tight flexible covers. The famous Pour All and Pour Top covers are designed for easy dispensing. They are made in sizes to fit all Tupperware containers.



When equipped with Tupper Seals, Tupper Canisters, Sauce Dishes, Wonder Bowls, Cereal Bowls and Funnel in various sizes are the most versatile reusable containers you have ever seen.





U.S. ROYAL GOLF BALLS **...packaged for putting** **on your gift list**

Distinctive Dennison Gift Packaging helps make extra sales of U.S. Royal Golf Balls manufactured by the United States Rubber Company.



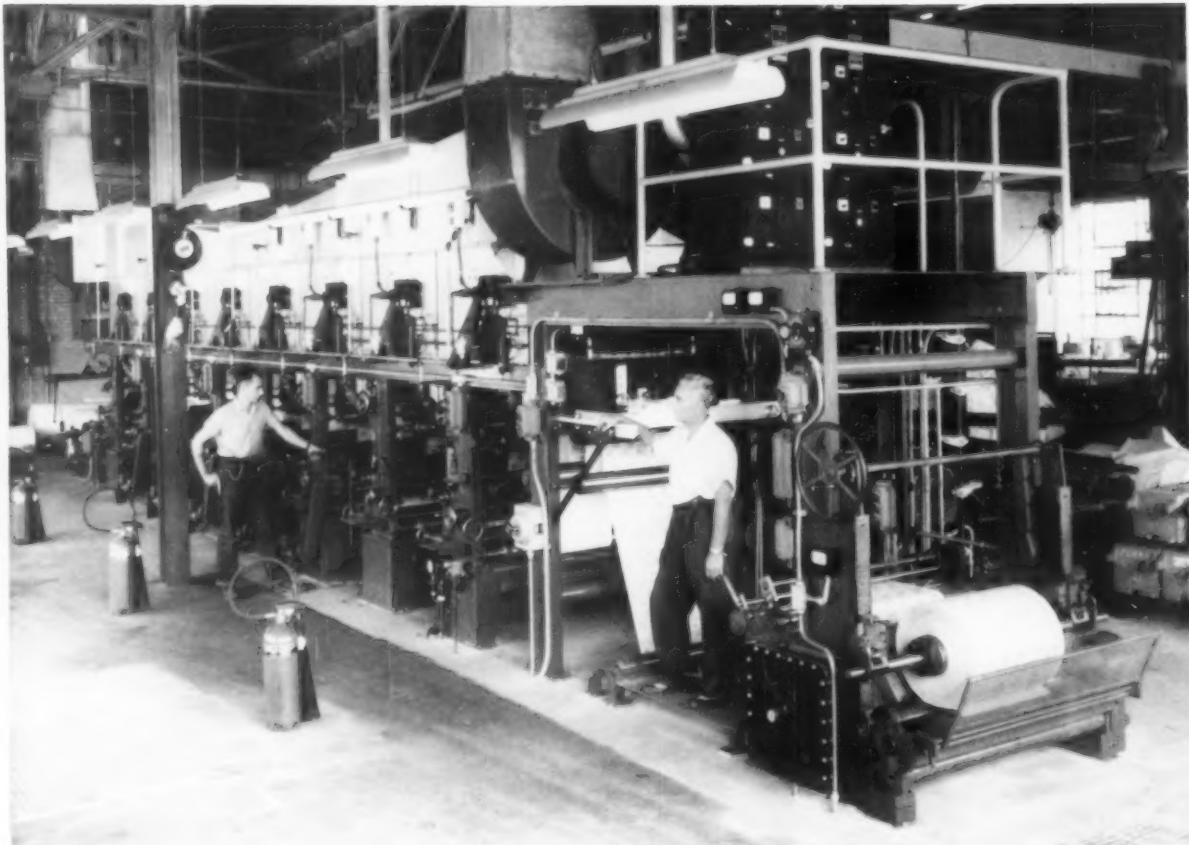
Dennison designers emphasized the masculine look with leather-like forest green cover papers and linings of simulated cork. The hinged top will not telescope over the base — provides real protection for the golf balls. Opened up, each box is an effective display piece. It is also a versatile "re-use" package.

Your product, too, can be packaged to appeal to retailers and consumers alike. Dennison designers and Dennison manufacturing facilities will keep it in harmony with your sales philosophy and your budget.



*Just call your Dennison representative or write:
DENNISON MANUFACTURING COMPANY,
BOX DIVISION, MARLBORO, MASS.*

NEW KVP 8-Color Gravure Press



New "Mouth Watering" Package Realism



Tempt the appetite and you make the sale. That simple axiom of food selling takes on new significance today at KVP. To 4-, 5- and 6-color letterpress reproductions with their sharp, clear brilliance have been added the vast opportunities for color modulation and realism of this huge 8-color gravure press.

These complete printing facilities — with the matchless brilliance and sealing qualities of KVP Kalapak and KVP SUPER Kalakote — can give your packages new appetite-tempting sales power. Write for the newest samples of KVP wrappers on products similar to yours.

KALAMAZOO VEGETABLE PARCHMENT COMPANY
KALAMAZOO, MICHIGAN

BRANCH AT DEVON, PA. ASSOCIATED COMPANIES: KVP CO. OF TEXAS, HOUSTON, TEXAS — HARVEY PAPER PRODUCTS CO., STURGIS, MICH. — KVP CO. LTD., ESPANOLA, ONT. — APPLEFORD PAPER PRODUCTS LTD., HAMILTON, ONT.; MONTREAL, QUE.

Specialists in FOOD PAPERS



For Protection and Sales Appeal

**"Pass the
GULDEN'S,
please"**



Conveyor synchronized
bottling line which
includes a Pneumatic
Rota Cleaner, Rotavac-18
Filler, Four-Head Capper
and Direct-Transfer
Labeler, at Gulden's
plant in New York City.

Millions prefer this mustard—

completely bottled by PNEUMATIC!

GULDEN'S Prepared Mustard has been "pepping up" good food for a good long time. It has established its name, its quality and its worth beyond question.

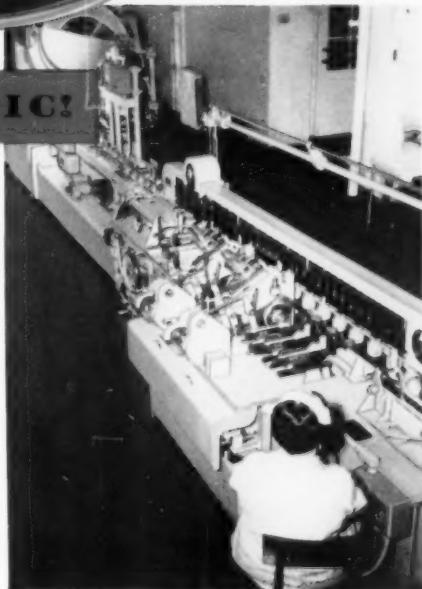
Bottling is an all important part of the process of preparing this product for sale. For an impressive number of the many years that GULDEN has been making its mustard, PNEUMATIC machines have been doing the air cleaning, filling, capping and labeling of the containers GULDEN'S comes in. Doing

it with such smoothness and accuracy that GULDEN'S regard for the efficiency and economy of PNEUMATIC equipment has grown greater as their experience with it has stretched beyond the thirty-year mark.

This experience is duplicated in many, many plants . . . in the packaging and bottling of a great, ever growing variety of products.

Look to PNEUMATIC — as other leaders do — for "lower cost per container".

PNEUMATIC SCALE CORP., LTD., 82 Newport Ave., Quincy 71, Mass.
Also: New York; Chicago; Dallas; San Francisco; Los Angeles; Seattle; Leeds, England.
Canadian Division: Delamere & Williams Company, Ltd., Toronto



Packaging and Bottling Equipment

SUPER
MARK

*In and Out
Like a Flash!*



Most food purchases are made by impulse, and supermarket shoppers average less than 18 minutes in a store. Only seconds for each item purchased. That means your product must have the appeal and beauty to attract attention and influence turnover.

A Dixie Designed Package Gives Brand Identification at A Glance!

Split-second buying decisions require packages with sparkling sales appeal . . . instant brand identification. Make your product more desirable . . . more appealing . . . in a DIXIE wrapper designed to fit your needs . . . a custom protective package with the beauty and appeal that only Dixie's modern

designing and fine flexographic and rotogravure printing can give. Dixie's printed Polyethylene . . . printed Foil . . . printed Acetate . . . printed Cellophane . . . are unexcelled in giving your products the beauty and appeal that mean faster turnover and more sales.

Just call or write your nearest

DIXIE plant for full information.



DIXIE

Wax Paper Company

DALLAS, TEX. • MEMPHIS, TENN. • WASHINGTON, N. J. • BURLINGAME, CALIF. • MEXICO, D. F.

For Fine Flexographic
Ink Service



SAN LEANDRO, CAL.



PHILADELPHIA

Coast-to-Coast

IT'S BBD

5 Modern Plants
to Serve You



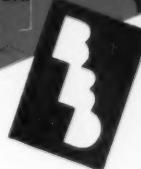
CHICAGO



CAMBRIDGE, MASS.



MONROE, LA.



No matter where you are, when you need the service of flexographic ink specialists, you'll find BBD near at hand. Now, with five strategically-located producing plants, BBD can dependably handle your every flexographic ink requirement . . . assure you that every order will be formulated by specialists, speedily dispatched. And, when you've got a knotty problem, the help of a "shirt-sleeved" BBD field-technician is yours in a matter of hours. For better ink service —coast-to-coast and border-to-border—call BBD.

Note new
Pacific Coast
location



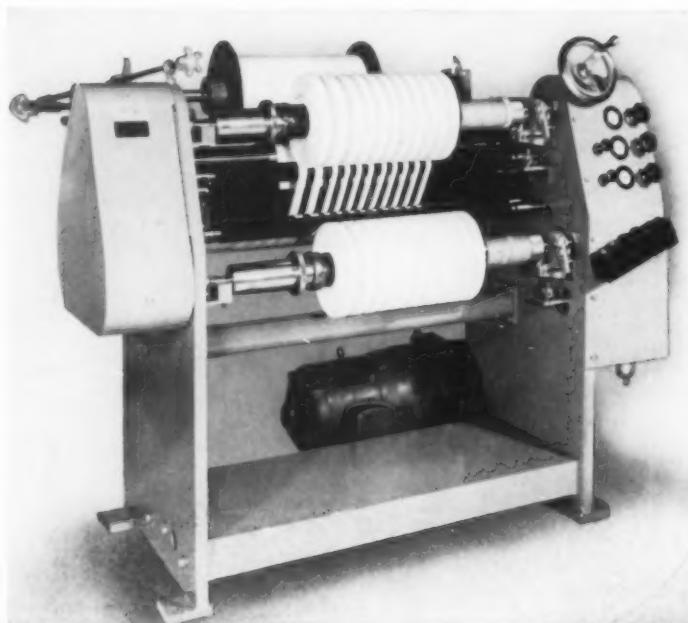
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Flexographic Ink Specialists

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CAMBRIDGE, MASS. • MONROE, LA.

MANTON BROS. TRENAL CO. COLORA, LTD.
Toronto, Canada Brussels, Belgium Berne, Switzerland
Export: McLARIN-JONES CO., New York

NEWLY DESIGNED...

DUSENBERY



**SHEAR CUT
AND
RAZOR BLADE
SLITTER**

MODEL 635

for

**FILM • TAPE
FOIL • PAPER**

MODEL 635
WIDTH 32"-42"-52"
•
**CORE SIZES AVAILABLE
1" THROUGH 6"**
•
MINIMUM SLIT WIDTH 1/4"
•
**SPEEDS 500 FPM
(Depends on static created)**
•
**TYPE 635 AB
REWIND 13 1/2"
UNWIND 18"**
•
**TYPE 635 AC
REWIND 18"
UNWIND 30"**
•
**FLOOR TYPE UNWINDERS
CAN BE SUPPLIED
FOR LARGER DIAMETER
MILL ROLLS**

An entirely new design based on the latest technique in the field of slitting plastic film, laminated foil, tape, glass cloth and paper. It has been tested and purchased by the largest producer of plastic film.

The main tension controlling devices on the payoff and rewind are air operated to enable operators to determine the optimum running conditions for a given material, and to duplicate previous performance.

While the machine has been designed primarily for use on large scale production slitting, it is ideally suited for engineering development purposes for slitting new products and obtaining quantitative data on products in production. Note that the machine is adapted for shear cut, razor blade and rotary type cutting. In special cases score cutting can be used.

JOHN DUSENBERY COMPANY, INC.

275 GROVE AVENUE, VERONA, N.J.

Tel: Verona 8-3915



How Marathon helped TRICO get to the heart of a celery packaging problem

Packing and displaying celery hearts attractively was a real problem . . . until Tri-Counties Packing Corporation and Marathon's General Packaging Department got together.

TRICO had been using transparent bags exclusively. Marathon recommended using cellophane overwraps

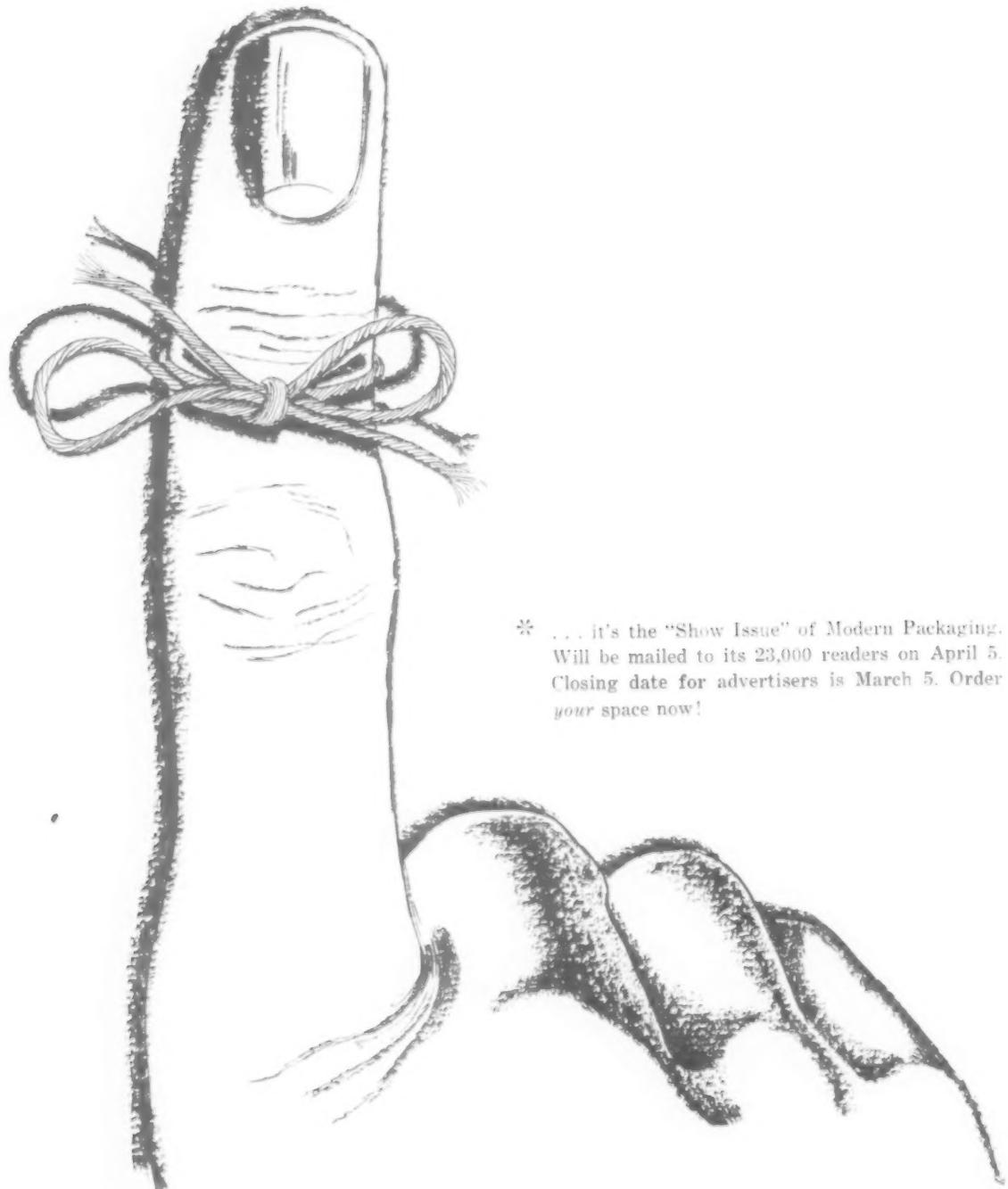
with printed trays to provide a high-speed automatic packaging line. Strong and easy to set up, they provide a clean, white, sanitary, appealing background for celery hearts . . . and the retail sales outlets are equally pleased since the trays are easy to handle and retain high product visibility in beautiful mass displays.

Whatever your packaging problem, Marathon's General Packaging Department offers you the same packaging research, engineering development and printing know-how that have made Marathon an outstanding leader in food packaging. Paper, paperboard, foils, films, special coatings—and combinations of these materials—are used to produce the right packaging for each job. Pulp mills, paper mills and manufacturing plants in Wisconsin, Michigan, New York, Washington and California, and in Ontario, Canada. Write Marathon Corporation, Dept. 708, Menasha, Wisconsin.

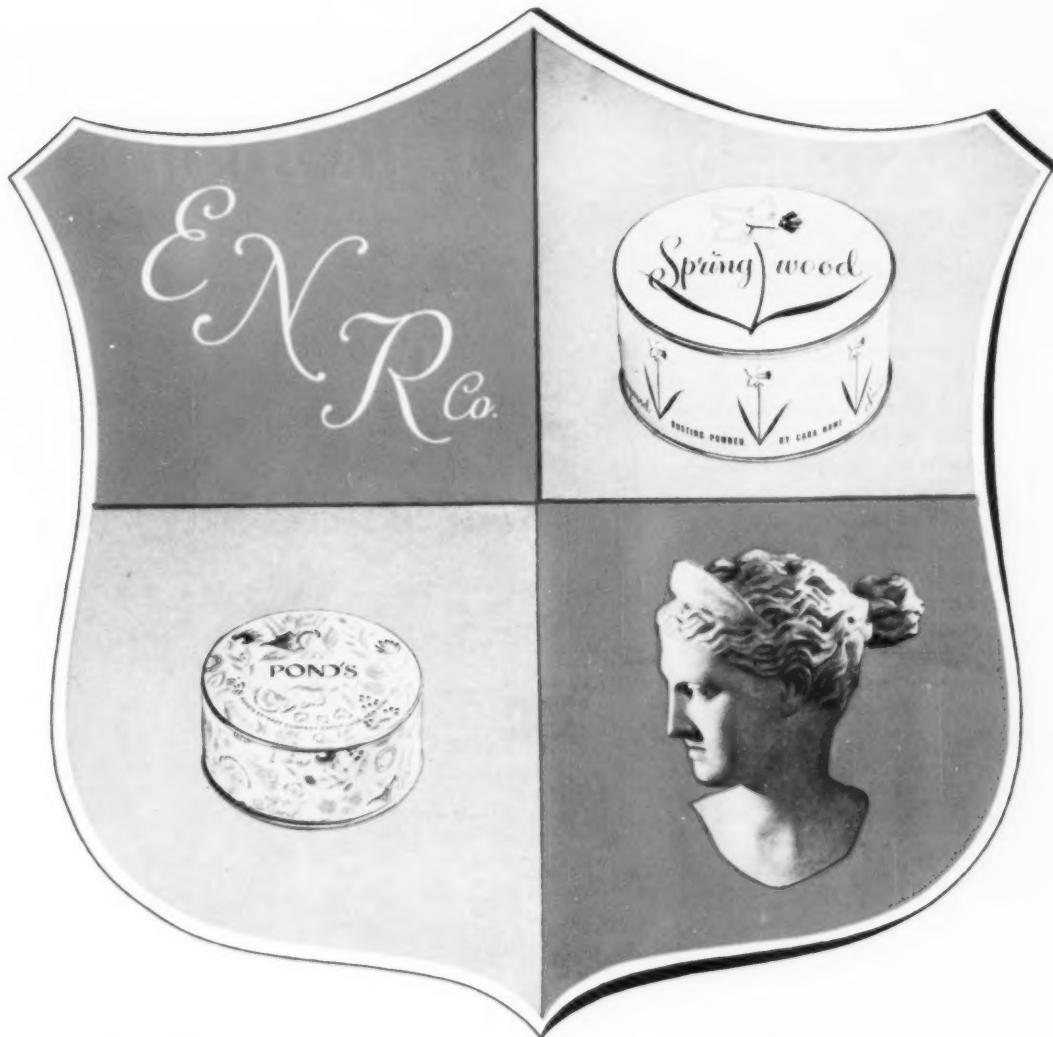
MARATHON  PACKAGES

Sell Brands • Protect Products • Speed Production

in April*



* . . . it's the "Show Issue" of Modern Packaging.
Will be mailed to its 23,000 readers on April 5.
Closing date for advertisers is March 5. Order
your space now!



For Quality that's Traditional
.... ROWELL BOXES

Round and square set-up boxes

...the finest materials and construction

Manufacturers of Fine Paper Boxes



Sign of gracious living...

Those who enjoy gracious living . . . those who want things to be exactly right . . . serve their drinks with Van Dyk's* Spanish Olives or Maraschino Cherries. They depend on these high quality products to add the final touch . . . the grace note . . . to their entertaining. And, of course, they use these Van Dyk and Reeves products for salads . . . desserts . . . hors d'oeuvres . . . any place where fine olives or cherries are called for.



To preserve their quality, Van Dyk's Spanish Olives and Maraschino Cherries are sealed with a handsomely lithographed Crown Screw Cap. This cap gives dependable protection to the flavor

and appearance of foods from the packing line to the consumer's table. Specially selected liners and the famous Deep Hook Thread, which will not wedge or bind, give the Crown Screw Cap unmatched sealing efficiency. Packers all over the nation who value their products guard them with the Crown Screw Cap. Crown Cork & Seal Company, Inc., *Closure Sales*, Baltimore 3, Md. *World's Largest Maker of Metal Closures*.

*Van Dyk's Spanish Olives and Van Dyk's Maraschino Cherries are packed by Van Dyk & Reeves, Inc., Brooklyn, New York.

CROWN CLOSURES

Approved by millions of housewives

fine-weld* seams give your merchandise

"showcase packaging"...

Send coupon for folder explaining the many benefits you get from the wide range of Bemis Polyethylene packaging.

Bemis



St. Louis 2, Missouri

Bemis Polyethylene
Bags made with the
newly perfected and
exclusive FINE-WELD
seams are your sales-
building, showcase
packages.

They...

Give complete seam-free
visibility, front, back
and bottom.

Give crisp, colorful, full-face
brand printing.

Give a neat, trim package,
with sturdy, almost-invisible
side seams—FINE-WELD,
the seam that is stronger than
the film itself.

And... *they are economical.*

*Trademark

BEMIS BRO. BAG CO.
408 Pine St., Box 49, St. Louis 2, Mo.

Please send folder about *Packaging for Sales in
Polyethylene.*

Name _____

Company _____

Address _____

City _____ Zone _____ State _____

John Dale OF ENGLAND

for quality containers

Collapsible tubes, metal
containers, closures to
your exact specifica-
tion—and made with
p-r-e-c-i-s-i-o-n



AGENTS IN INDIA

HOARE MILLER &
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P.O. BOX NUMBER 63.
CALCUTTA, I.

JOHN DALE
LIMITED

JOHN DALE LIMITED, BRUNSWICK PARK ROAD, NEW SOUTHGATE, LONDON, N.11, ENGLAND. TEL: ENTERPRISE 1272



The voice of color!

S&V color speaks louder than words. It's the quickest means of attracting attention . . . the truest way to depict a product . . . the surest means of making a lasting impression. That's why so many thousands of printers let S&V color speak for them. You, too, can depend on S&V for the finest in all types of printing inks—for the widest range of brilliant colors, and the best in personal service.

OVER 35 BRANCHES PROVIDING SERVICE
FROM COAST TO COAST

Sinclair and Valentine Co.

Main office and factory: 611 West 130th St., New York 27, N. Y.



...production's really sold on 'em—and they're priced right!"

Plant...department...or individual—everyone's sold on Avery Pressure-Sensitive Labeling. Here's why:

■ Countless hand operations are eliminated...one simple motion and they're on to stay—without moistening! Avery Kum-Kleen Labels are fed, either one-at-a-time from an automatic dispenser, or from sheets for individual labeling.



SPECIFICALLY SPEAKING...

Every segment of the food industry finds money-saving uses for Avery Self-Adhesive Labels...from meat packers to confectioners—from bakers to dairies—from vegetable shippers to frozen food packers.

Why? Because Avery Kum-Kleen Labels adhere firmly to boxboard, varnished surfaces, plastic materials of all kinds, and most other packaging materials...and they withstand the rigors of a frozen food locker or the intense heat of store windows.

For package identifications, for brand name promotion—for price marking, or as contents labels, Avery Kum-Kleen Labels are superior. They'll cover up printed data that has become obsolete, or carry a hard-hitting sales promotion message on your present package. Write for FREE samples...Try them!

FREE—label analysis service!

Avery labeling specialists, experienced with the requirements and labeling problems of many industries, are at your service to help you develop improved, low-cost self-adhesive labeling methods. No obligation...write today!

AVERY
Kum-Kleen
LABELS

AVERY ADHESIVE LABEL CORP., Custom Div. 127

117 Liberty Street, New York 6 • 608 S. Dearborn Street, Chicago 5
1616 S. California Ave., Monrovia, Calif. • Offices in other principal cities

Please send case histories and free samples Have the Avery Label man call

Name _____

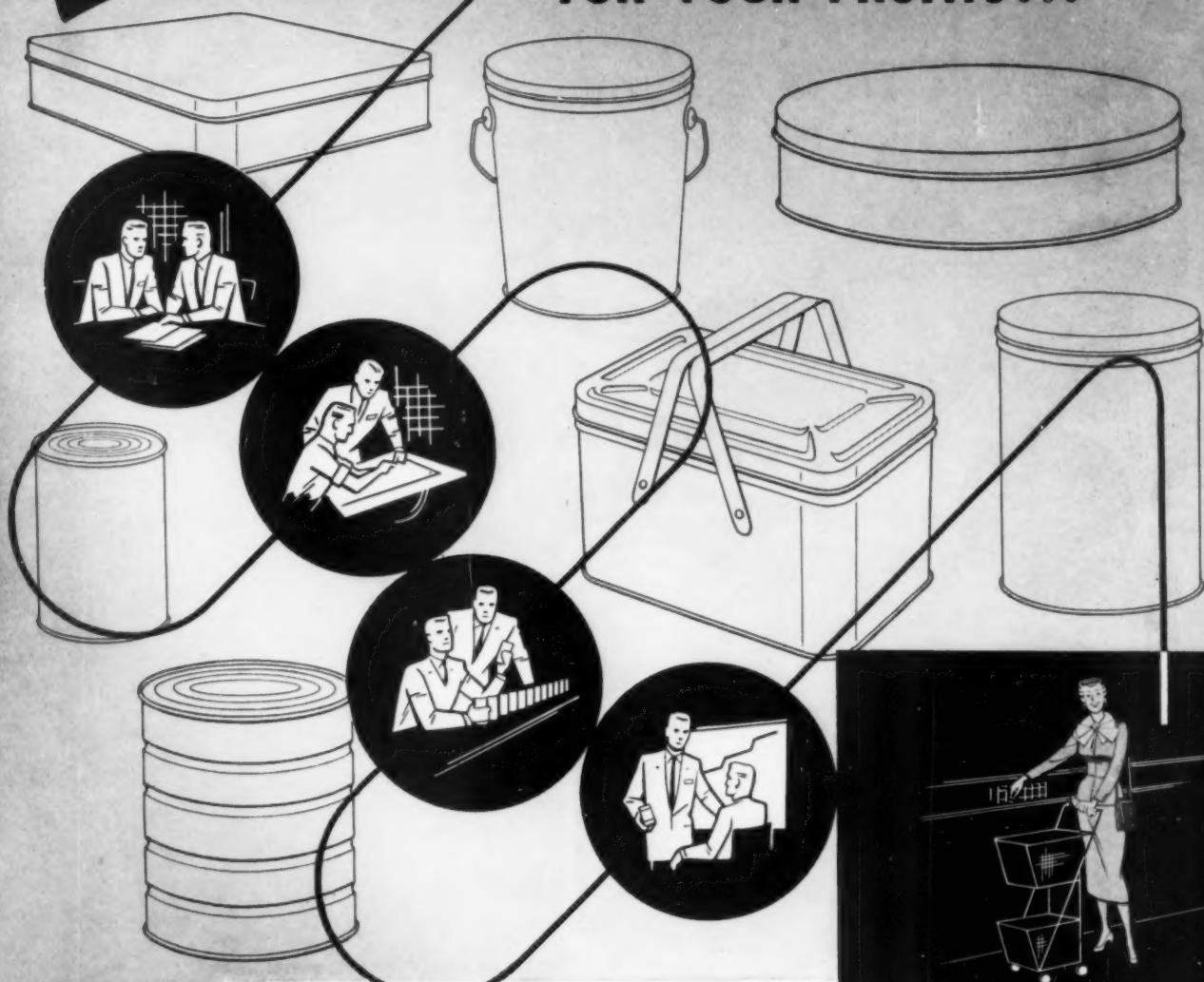
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Industry

Sales Skyrocket with Premiums

BY J. L. CLARK

for General Mills!



To help promote the sale of its cereal products, General Mills, Inc., of Minneapolis, Minnesota, had long relied on small premiums designed to appeal to youngsters. And when in 1952, it planned to offer for "Wheaties", the famous "Breakfast of Champions", a full series of miniature automobile license plates, there was little question of potential success. The problem was one of production: the plates must be all-metal, full-color, and embossed for authenticity — one for each of the 48 states and dozens of foreign countries. What manufacturer could turn out the astronomical numbers *fast enough and economically enough*?

J. L. Clark Manufacturing Co. met the challenge — and turned its creative facilities and "know-how" to the special problems involved. Obviously, not *all* the varying sizes and shapes of license plates could be duplicated in scale in volume production — so a compromise system of three basic structures (each about 1/6 actual size) was adopted. Next came the feat of assuring perfect register of multiple lithographed colors over embossed letters and figures — and special manufacturing processes to guarantee high-speed and cost-economy. Finally, miniature plates were edge-hemmed for safe handling.

The result — millions of beautiful license plates (and later, full-color reproductions of automobile emblems) which overnight became prized collector's items and created an unprecedented demand for "Wheaties", giving General Mills *two of its most successful promotions*. It took special tools to do the job . . . specially designed equipment, and special methods born of Clark's half-century of experience. But problems like this are our business, and we can do as much for *you* . . .

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PERMANENT OR REMOVABLE

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Gone is the glue pot! Gone is water! Steigerwald Sensi-Stick pressure sensitive labels eliminate forever old-fashioned start-up and clean-up labeling machine jobs.

Sensi-Stick simplifies labeling to a 1, 2—pick and stick quick way—Individual labels or Dispenser automatically feeds individual labels on a tape ready for rapid application.

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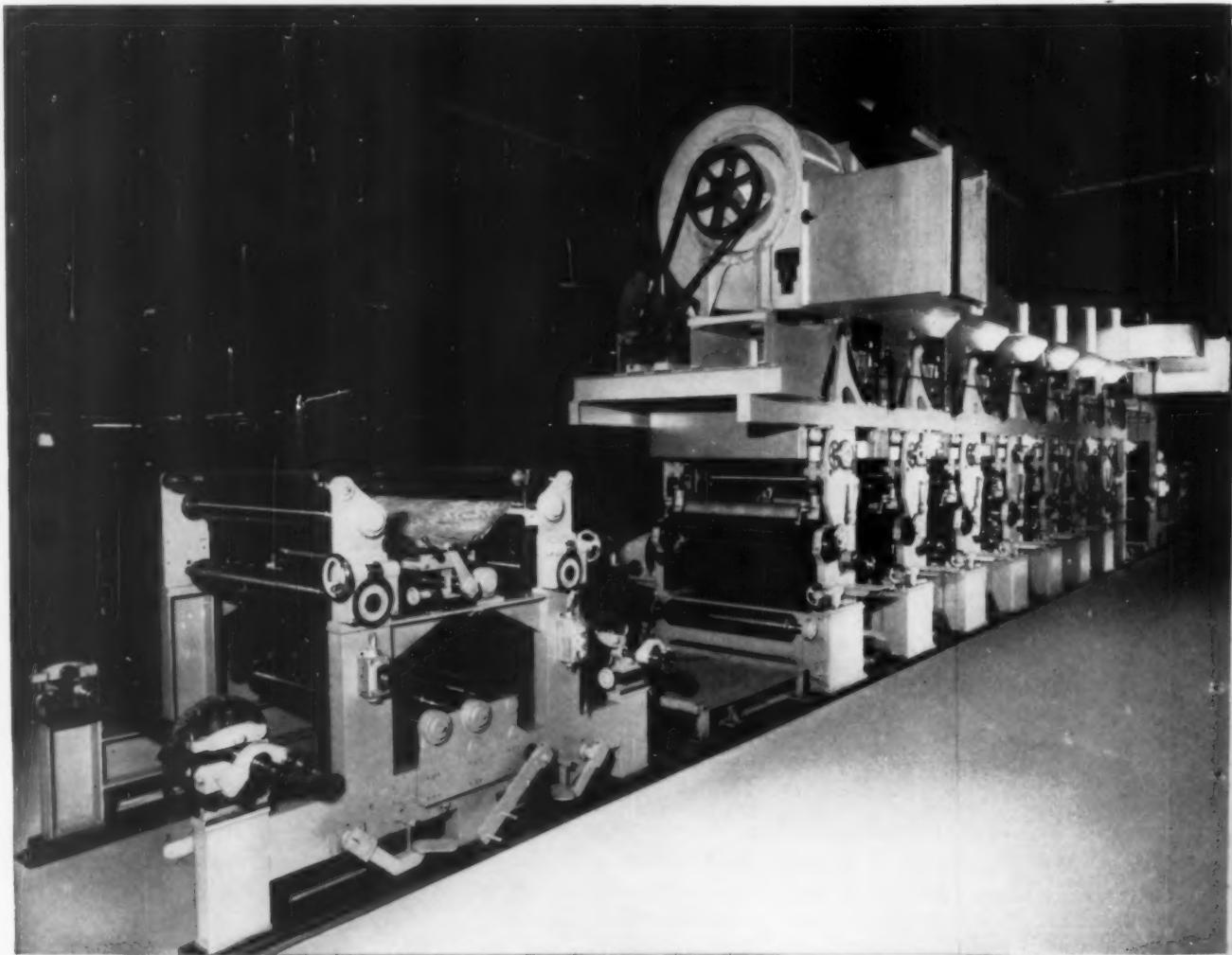
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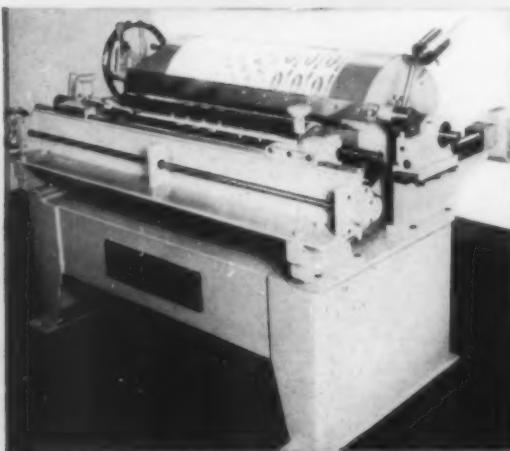
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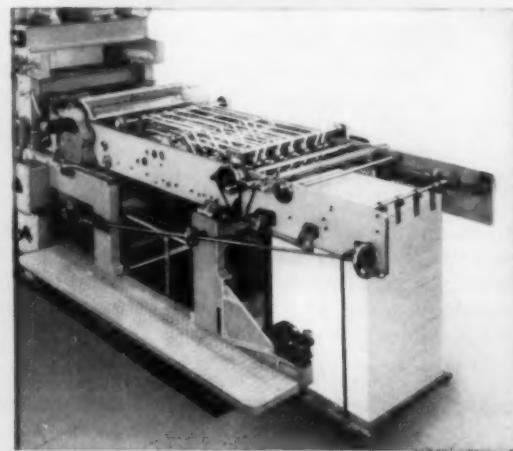




PA Gravure Press mass produces wraps for bread, soap, food and other packaged products; and prints labels, catalogs, direct advertising, gravure specialties.



Retogravure Cylinder Proof Press in standard widths of 40", 50" and 60" provides composite or progressive proofs, shows color separation, etching, register prior to printing.



Hi-Speed Rotary Sheeter and Auxiliary Rewind delivers 15,000 accurately cut and squared sheets an hour. Folders and rewind deliveries are also available.

There's an ATF gravure press and auxiliary equipment to meet your every package printing need

If hard-to-handle stocks, difficult inks, inadequate speeds, lack of auxiliary equipment, or insufficient quality control have raised a printing problem, you'll find the answer at ATF.

You'll see a line of presses that will handle laminated foil, glassine paper, cellophane or lightweight board; that will lay down one to eight colors—ink, lacquer, varnish or metallized inks.

You'll choose from web widths up to 73", speeds up to 1250 ft/min for the mass production of wrappings for bread, soap or food; labels, gift wraps, catalogs, direct mail, calendars; and a wide variety of

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You'll find deliveries for accurately cut squared sheets, rewound rolls, or folded signatures as well as gravure proof presses and cylinder engraving equipment.

And your pressmen will like ATF's virtually trouble-free operation. Unique ATF-Klingrose features (listed below) keep downtime to the minimum and enable you to turn out top-quality gravure reproduction every time. For further information write American Type Founders, a subsidiary of Daystrom, Inc., 230 E. Sandford Blvd., Mt. Vernon, N.Y.

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A complete custom line of rotogravure press equipment:

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K.4.1

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on web-fed, gravure and offset equipment
now serves you in ATF's Mount
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BETTER, MORE PROFITABLE PRINTING FROM THE WIDEST LINE OF PROCESSES

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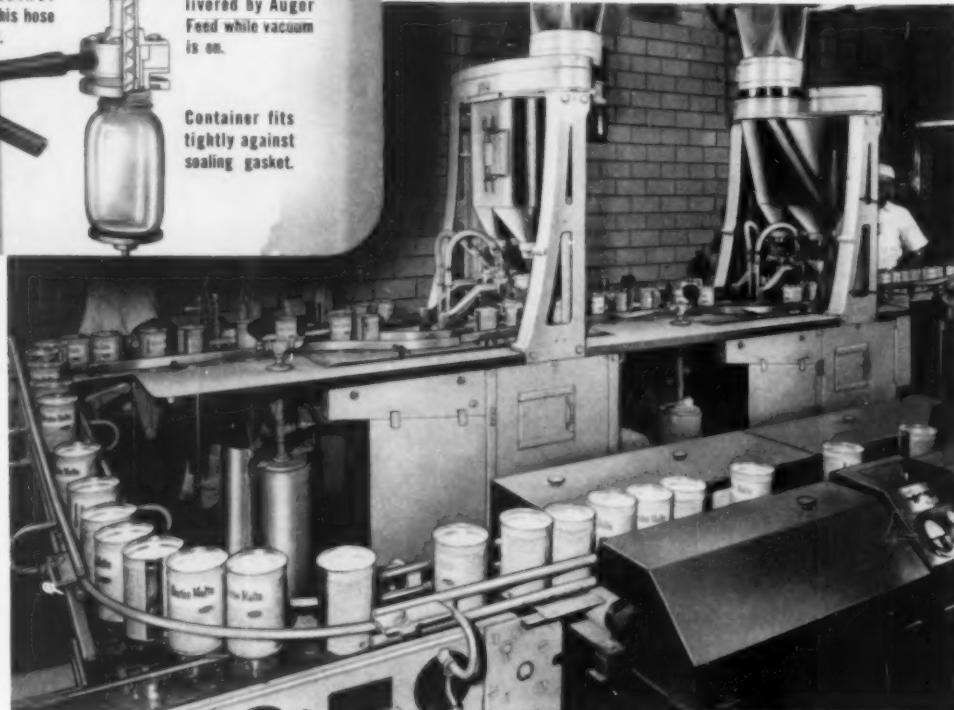


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One-pound cans of [®]Dextri-Maltose are filled at a speed of 120 per minute with this Stokes & Smith Four-Station Automatic Filling Machine, at Mead Johnson Company, Evansville, Indiana.

Stokes & Smith modern Auger-Vac filling equipment protects profits by maintaining a clean, accurate fill, and reducing dusting loss to an absolute minimum.

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TRADE MARK

"DOC" had a Packaging Problem, too



*Clearsite** solved it for him...
...they can solve it for you

"Doc," the druggist, has to protect his pharmaceuticals. That's part of his ethics. He has to merchandise them, too. Celluplastic transparent containers solved both problems simultaneously for him. They'll do the same for you.

Whether you're selling pills or drills, fish hooks or lipsticks, package them in Clearsite Transparent plastic con-

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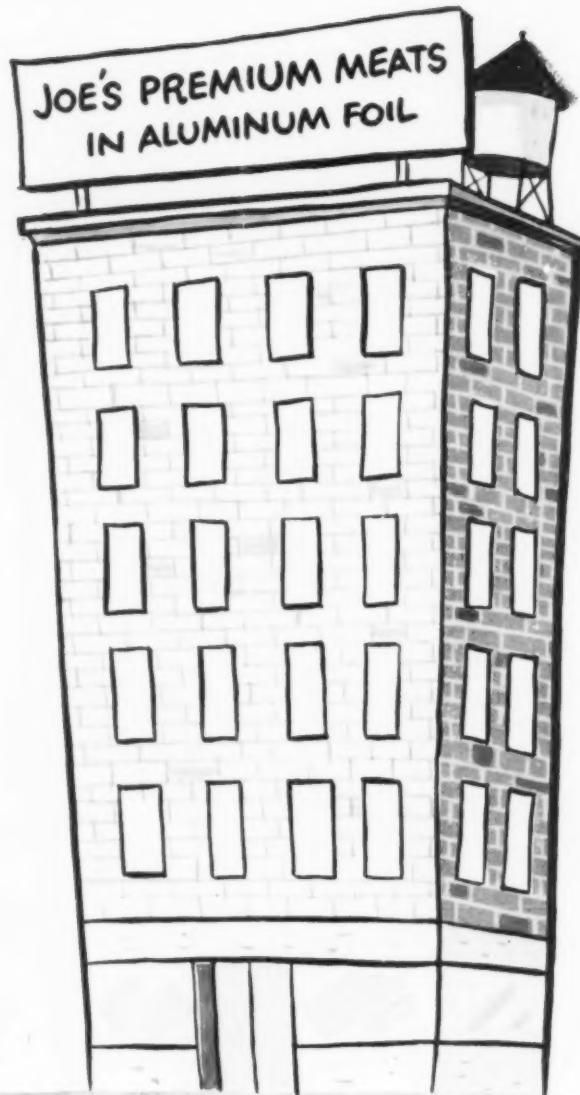
TRANSPARENT

*Clearsite**

PLASTIC CONTAINERS
that Sell

*REGISTERED TRADE MARK

How to Grow Like Joe



JOE'S ANSWER TO COMPETITION is aluminum foil packages that give extra protection to his product—thus permit distribution over greater distances to *profitable new markets*.

If you want to step ahead of competition, as more and more progressive meat packers are doing, package your product in aluminum foil which provides all these advantages:

FLAVOR PROTECTION—Aluminum foil is non-porous, seals in flavor, seals out damaging air and moisture. Reflects heat and light. Imparts no flavor. Prolongs shelf life.

SALES APPEAL—Eye-catching aluminum foil gets attention for your product on the shelf or in the refrigerated case. Makes your product more desirable to customers, because it reflects the quality it protects!

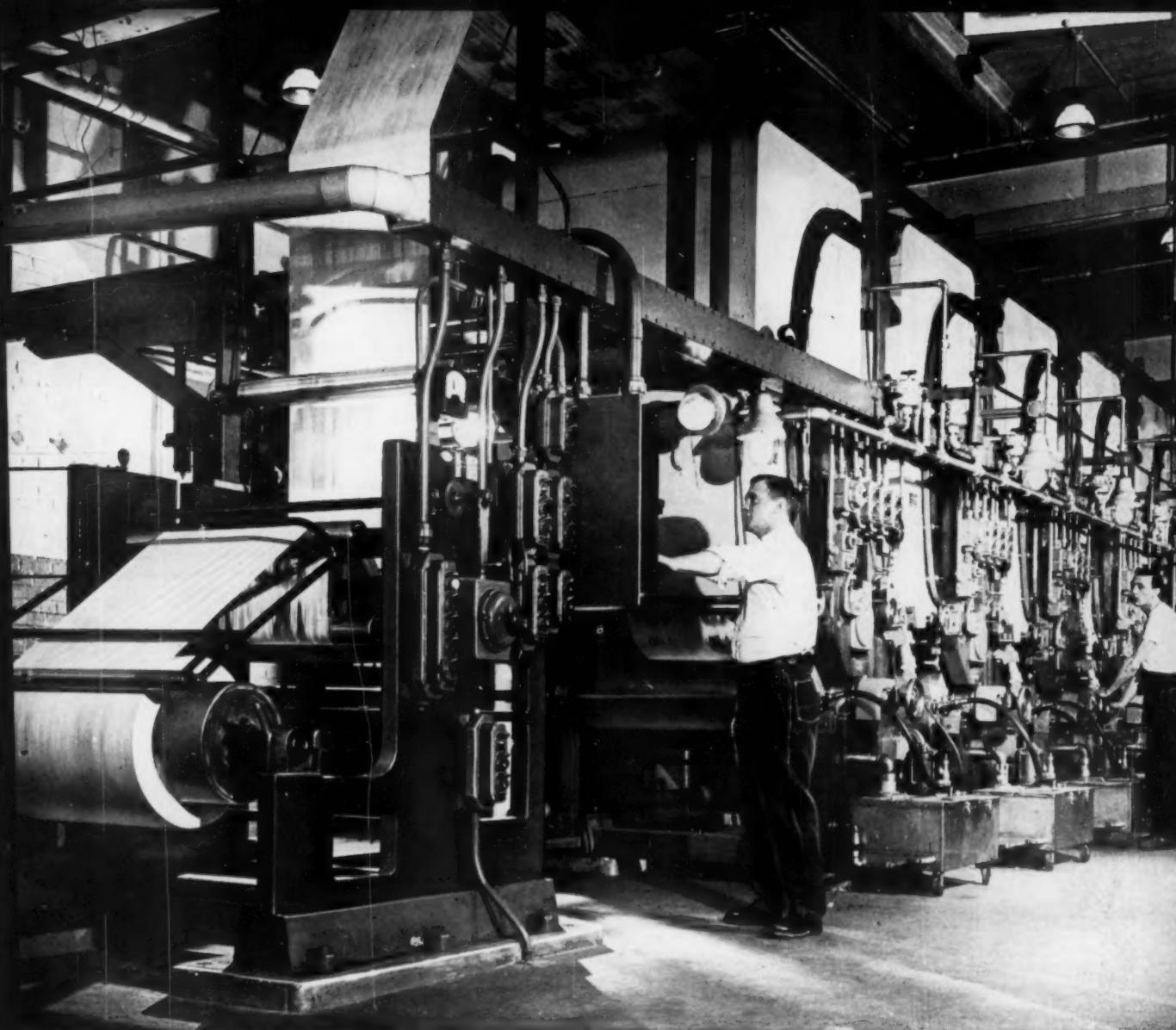
PRODUCTION VERSATILITY—Foil is pliable, easy to handle, easy to print on. Takes economical and reliable heat seal. Can be printed, colored, coated, embossed, combined with other materials. Superior cold transfer characteristics for frozen foods.

WE DON'T MAKE PACKAGES, BUT . . . There are many leading converters eager and qualified to tackle your packaging problem with you. These converters rely on Kaiser Aluminum as a major supplier because we are an integrated operation, producing foil of unsurpassed quality in a wide range of specifications. Our Engineering and Development Division is available to work closely with converters and with you.

For names of leading converters contact any Kaiser Aluminum sales office listed in your telephone directory. Kaiser Aluminum & Chemical Sales, Inc., General Sales Office, Palmolive Bldg., Chicago 11, Ill.; Executive Office, Kaiser Bldg., Oakland 12, Calif.

Kaiser Aluminum

setting the pace—in growth, quality and service



Complete Accessibility of the Kidder gravure press is one of many advancements that make it easier for your operators to deliver the top-quality results you want.

Kidder gravure has earned its leadership

Large Converter Writes:

"I am especially pleased with the wonderful workmanship . . . You are to be highly complimented on an exceptionally fine job of engineering . . . This press has everything our pressmen have been asking for."

Speed — 1,000 f.p.m. — in perfect register — fully dried — accurately rewound.

Quality — A Kidder Gravure

Press prints the *entire* etch — gives an exact reproduction of the original.

Economy — Revolutionary doctor blade control doubles cylinder life — controlled inking and drying reduces solvent loss.

Ask us for the whole story on how the Kidder Gravure will print your product at the lowest overall cost . . . Kidder Press Company, Inc., Dover, N. H.



Kidder

*Letterpress, Flexographic
and Gravure Presses
Slitters and Rewinders*



CELLU-CRAFT TRANSPARENT PACKAGES

- are engineered to **SELL**
- are engineered to **PROTECT**
- are engineered to **FACILITATE HANDLING**

DEPENDABLE SUPPLIER TO ARMOUR & CO. FOR MANY YEARS

Phone or write for a Cellu-Craft Packaging Consultant.

"CREATORS AND PRODUCERS OF PERFECT PACKAGING AT LOWEST COST"

CELLU-CRAFT PRODUCTS CORPORATION

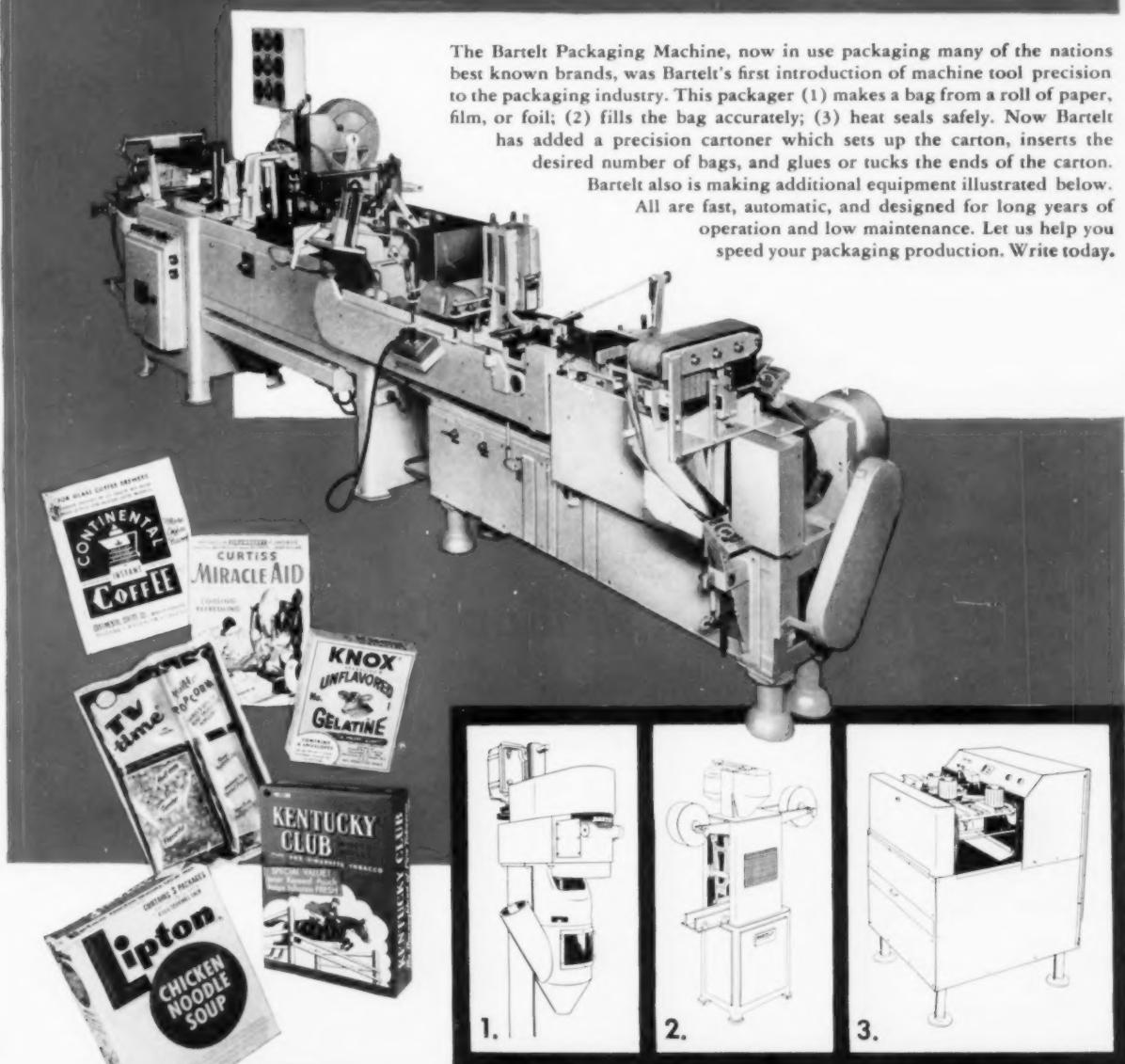
DESIGNERS, CONVERTERS AND COLOR PRINTERS OF FLEXIBLE PACKAGING MATERIALS

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BAGS • ENVELOPES • SHEETS • ROLLS • CELLOPHANE • POLYETHYLENE • PLIOFILM • FOILS • ACETATE • PLASTIC FILMS • GLASSINE

BARTELT

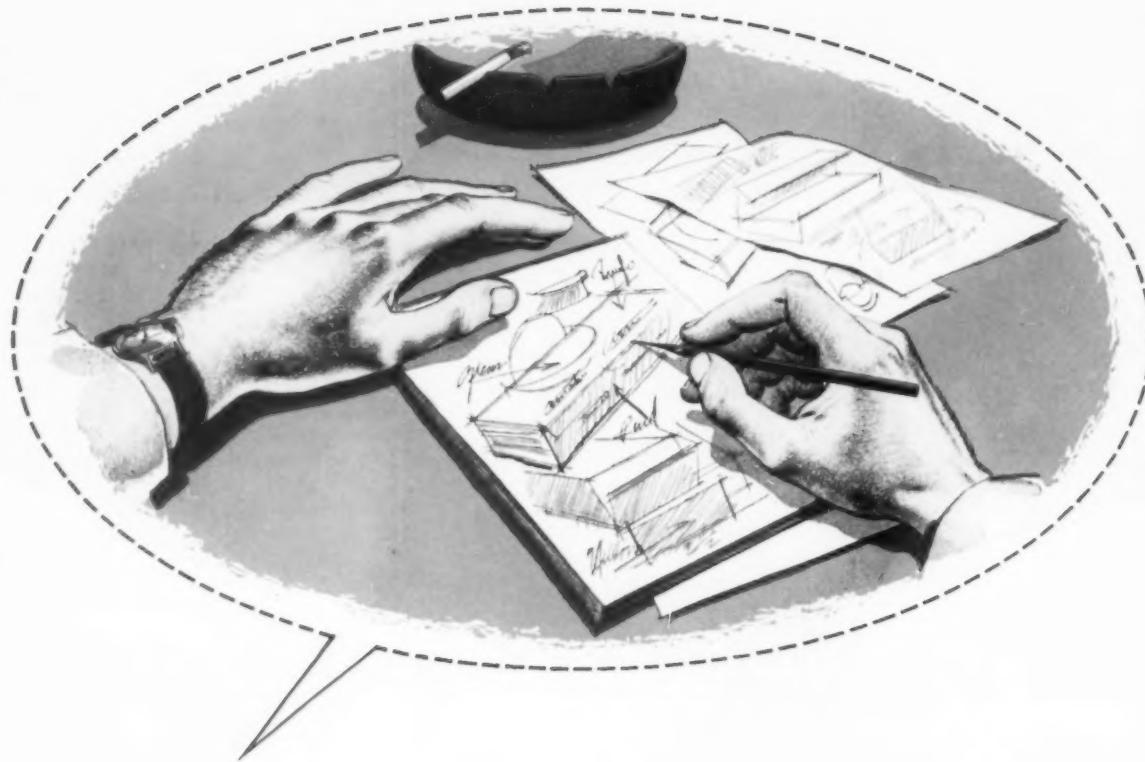
Fine Equipment for the Packaging Industry



The Bartelt Packaging Machine, now in use packaging many of the nations best known brands, was Bartelt's first introduction of machine tool precision to the packaging industry. This packager (1) makes a bag from a roll of paper, film, or foil; (2) fills the bag accurately; (3) heat seals safely. Now Bartelt has added a precision cartoner which sets up the carton, inserts the desired number of bags, and glues or tucks the ends of the carton. Bartelt also is making additional equipment illustrated below. All are fast, automatic, and designed for long years of operation and low maintenance. Let us help you speed your packaging production. Write today.

BARTELT
ENGINEERING CO.
1900 HARRISON AVENUE
ROCKFORD, ILLINOIS

*Machinery for
Creative Packaging*



“Doodle” with a Million Dollar Future?

Could very well be. Often packaging ideas are born that way—a few rough lines—a new “twist” in construction or design—and another fine product gets the impetus of a great innovation in packaging.

There's more to it than that, of course—and Gardner has all the men, machinery, and experience to translate packaging dreams

into successful packaging realities. But the point remains: new packaging concepts begin in men's minds and this may be the time to set us thinking about a great new package for you.

Why not call in a Gardner representative, brief him on your problem, and let us take it from there?



Many of America's greatest products go to market in "Cartons by Gardner"

GENERAL OFFICES: Middletown, Ohio—PLANTS: Middletown, Ohio; Lockland (Cincinnati), Ohio
SALES OFFICES in Chicago, Cleveland, New York, Philadelphia, Pittsburgh, St. Louis, Greensboro, N. C.

THE GARDNER BOARD AND CARTON CO.



Manufacturers of Folding Cartons and Boxboards



FROM THE GARDNER GALLERY OF FAMOUS AMERICAN PACKAGES

Flag more shoppers with

NASHUA PRINTED CELLOPHANE

In the parade of products competing today for the shopper's roving eye, this Betsy Ross Rolls package "comes to attention". Designed and printed by Nashua for Morehouse Baking Co., Lawrence, Mass., the red, white and blue color printing on bright cellophane gives the package eye-catching display.

Here is another example of Nashua sales-wise package planning. A "family" design that ties in with this baker's bread wrap . . . sharp precision printing and brilliant colors that attract attention. Perhaps Nashua packaging specialists can help *you* make the most of today's impulse buying . . . in supermarkets as well as on routes.



Send for samples of Nashua-printed saleswraps — in a variety of flexible packaging materials — created for many sales leaders in the baking industry.



NASHUA CORPORATION DEPT. MP-2, 44 FRANKLIN STREET • NASHUA, NEW HAMPSHIRE
DESIGN/PRODUCTION *Everything in Flexible Packaging that Sells*

MODERN PACKAGING

February 1955, Vol. 28, No. 6

INTERVIEWERS were dispatched to homes in all parts of the country to test consumers on five unidentified cold-mold decanter designs. Only known previous decanter purchasers were interviewed in this preference survey to help in the selection of a Brown-Forman Old Forester decanter for the 1954 Christmas holiday season.



DESIGN, RAYMOND LOEWY ASSOCIATES.

How do you
test package
design?

There's still no research substitute
for experience, say today's leaders,
but here are 10 ways they are trying
to find out what's in consumer minds

The scene is a company president's office.

A decision must be made on a new package design.

The sales manager, the advertising manager, the production manager, the head of packaging—all the top brass are there, along with the package designer.

"Sure, I like it," says the president. "But how do we know people will buy it? How can we prove we are right? My wife says..."

The situation sounds familiar, doesn't it? It's a drama re-enacted almost every time there is a package change, or a new package to be selected for a new product.

During the last few months MODERN PACKAGING's Reader Service Department has been deluged with requests for information on how to test the effectiveness of package design.

Undoubtedly interest has been stimulated by the newer and widely publicized psychological techniques for market testing currently being discussed in such terms as "mass motivational research," "indirect research



TEST CHECK-OUT COUNTER in a local supermarket was arranged for package testing, based on the motivational research technique. The respondent was told to put her packages in the proper category on board marked, "Planned by kind," "Substitute," "Reminded by brand or kind" and "Just saw it." Packaging responses were isolated for "depth interviews" to discover the hidden "whys" for selections made.

methods" and "depth interviews." A factor, too, is the increased attention being paid to color-rating tests, instrument methods, hidden-camera and mirror tests to determine maximum package design acceptance.

New dimensions, apparently, are being added to the purely quantitative test methods of polling consumer opinion that have been used almost exclusively as criteria for measurement in the past. Packagers today do not want to know simply *how many* people say they will buy a certain packaged product; they want to know *why* they buy.

Experience has shown that the consumer does not always do what he says he will do when he goes to buy. Present research efforts are being directed toward getting at those hidden reasons scientifically.

As a result of this interest, MODERN PACKAGING decided to go to representatives of leading companies in the

food, toiletries and drug fields, and to leading designers and research experts to find out what practical steps can be taken to eliminate guesswork in package design. Our findings are reported herewith in primer form to provide a useful answer to the many inquiries constantly being received.

The objective was to ask each—in relation to his company's own packages—just what was done to arrive at those decisions on package changes, involving thousands or perhaps millions of dollars, which occasionally result in a revolution not only in a company's own merchandising program, but in an entire product field, as happened a few years ago with the introduction of the squeeze bottle for spray deodorants.

It appears that market-research procedure on packaging is conducted similarly in all companies today, but varies greatly in the degree of study that is done, depending on the evi-

dence required to arrive at a final decision, the budget available for research, the size of the company and its particular problems.

It also appears that most firms are still groping and hoping for more reliable measurement criteria. In almost every instance they wanted it pointed out that consumer research, so far as packaging is concerned, can be trusted only to establish directions. There is still no research substitute, say the leaders, for experience or genius—the inexplicable spark, intuition or whatever you want to call it that makes a good package—just as it makes a good painting, a good book or a good play.

As one advertising agency vice president put it: "There is still no research in the world that can measure the power of the Mona Lisa smile." Likewise, in his opinion, there is no substitute for the judgment of a designer with an established record of success. "You will find that no matter how much research is done," he said, "the intelligent manufacturer still leans heavily on the recommendations of competent designers."

The situation was summed up by the head of a consumer research department in one of the largest toiletries manufacturing firms employing about 50 people regularly on its market research staff and reportedly using every known research technique:

"Come back in five years and I think we will have a whole lot better clues to the answers than we feel we now have."

And the following statement from the head of the design staff of a leading cosmetic house shows that any firm that is uncertain after all the research is done, is no different from the rest:

"We try to find out as much as we can about what will catch on," he said, "by observing packaging trends in our field, reports from our own sales forces, opinions of buyers and consumers, but with all that we launch every new package with a prayer." This comment is even more significant coming as it does from a firm whose original success grew from a series of package sketches the founder took to cosmetic buyers around the country.

The need for a new package may arise for a variety of reasons—to improve competitive position, to introduce a new product, to offer greater consumer convenience. But as soon as the desire is put into action, a design

must be selected. Some of the advantages and some of the pitfalls of research procedures as now conducted are discussed under the following steps.

The starting point, obviously, is a series of sketches or reasonable facsimiles of the proposed packages. These sketches can be nothing more than empirical, based on experience and observation. Nevertheless, the most successful appear to be those selected by experienced "captive" designers on company staffs or expert independent design consultants whose judgment can be trusted.

1. Preliminary check list. In the preparation of these designs, it is possible to use a carefully prepared check list of points covering known characteristics of the product, its market, consumer buying habits, package size, competition, desired appearance for identity, information, attention potentials, etc. The *Modern Packaging Encyclopedia* carries a comprehensive list of these points.¹

The number of sketches is an arbitrary matter. Often a decision can be

¹ See "Merchandising Check List," *Modern Packaging Encyclopedia*—1955, p. 23.



LABORATORY SUPERMARKET is used for package testing to approximate "competitive climate." Children between four and 12, and mothers were told to choose the breakfast food they wanted. Respondents were "depth interviewed" by clinical psychologist on their choice.

PHOTOS COURTESY INSTITUTE FOR RESEARCH IN MASS MOTIVATIONS, INC.



reached with submission of two or three sketches. At other times, the number considered, including the various arrangements of elements, color combinations, different package forms and sizes in a family group, may run up to 50 or 100.

2. Preliminary eliminations. It is usually the job of management to narrow down the original series of designs to a workable number by opinion or vote among representatives of sales, product development, advertising, production, legal and packaging departments. In some cases this group may be so sure of its ground that no testing by scientific or theore-

tical methods is deemed necessary. It is a matter of record that when the Borden Co. selected its "Elsie Daisy" symbol—the now familiar trademark of Elsie the Cow in the center of a daisy—the company made its decision to put the design on its packages without testing of any kind. The value of Elsie as a "saleswoman" had long been proved in the company's advertising. The sunburst pattern of the yellow daisy surrounding the portrait of the cow was selected unquestionably as providing strong imagery for association and memory value. And it proved its way as a successful symbol on the company's trucks.

Many decisions are not arrived at so easily. When major changes are contemplated, like redesigning a long-established trademark, introducing a radically new color scheme or a new package form, involving a different packaging material or new dispensing feature, most managements will not

make a decision today without trying to get a pretty sound indication of consumer reaction.

3. Employee opinions. Obviously the first place to turn for a wider range of opinion is a company's own employees. No matter what professional researchers have to say about this practice, it is quite generally used. Companies with large office and plant forces feel that opinion tests among employees in a wide range of income and social groups can provide a starting point at least. And as in all research, of course, the results depend upon the techniques. If the questions are asked so that the respondent thinks he is pleasing the boss, it's no good.

The president of one sizable New York confectionery firm relies almost entirely on the opinions of his total payroll for the selection of candy-box designs. If more than 50% say they like a design, he will put it into production. If less than 50% like it, the

design is rejected. In 15 years of experience, he has reportedly never been disappointed, except when he went ahead with less than a 50% favorable reaction. In his case, the problem is relatively simple. His employees may all be considered consumers of the product. And they are asked to select box designs purely on aesthetic appeal and attractiveness.

A cosmetic manufacturer relies to a degree on the same kind of employee opinion tests, although he rejects designs, he said, with less than 90% favorable reaction. He also accepts only immediate, quick reactions between two designs. If there is a moment's hesitation to make a decision, the opinion is not counted.

Some designers also often use such methods as a starting point. It sometimes gives an indication of design direction, even if we completely disregard the findings later on, said one leading designer.

4. Salesmen's opinions. The wise



TRIAL RUNS of several totally different Marlboro packages were tested in different sections of the country. New flip-top carton, printed in red on white with midnight-blue lettering, was the final choice as the result of one of the most comprehensive package-testing projects recently undertaken. Hidden cameras caught consumer reactions in test stores. Note side placement of pre-cancelled revenue stamp.



NEW CHOCOLATE GIRL on redesigned Baker's Cocoa package provided a proving ground for extending use of modernized trade symbol on other Walter Baker products, as illustrated by new package for semi-sweet chocolate chips.

BRAND, JIM RAKE

manufacturer will not go far in making a package decision without the opinions of his selling forces. Their reaction not only provides valuable clues to market acceptance generally, but no package—no matter how good—can be a success without their cooperation. That is why when a design is still in development stage, it usually will be presented at a general sales meeting or sent in dummy form to district sales offices.

5. Street and house-to-house interviews. When the need for more far-reaching data becomes apparent, the consumer opinion poll technique is put into operation. This has been the most generally recognized method of getting quantitative reaction to what people will buy. Selected groups of consumers are asked their preferences on color, design, package functions and other features in which the manufacturer may be interested.

If all variables can be eliminated through correct statistical methods, this procedure can sometimes provide conclusive results. Too often, however—and marketers seem to be keenly aware today of the shortcomings—it does not provide a trustworthy answer for various reasons: errors and inadequacy of the sample, lack of skill of the interviewers, incorrect wording of the questionnaire, plus the psychological aspects that people do not always do what they tell an interviewer.

When this technique is used, it is essential that the procedure be established by experts, or it will not produce the desired information or reliable results. There have been so many glaring examples of mistakes

that many managements are inclined to disregard its value.

6. Panel research. Unreliability of opinion polling when the sampling is not carefully controlled has led many companies to use the consumer panel technique as a means of getting a more selective sample. Some firms—particularly the big ones—often maintain a continuous panel of known users of their products and competitive ones, which can be selected by age groups, income groups, sex, occupations, geographic distribution or other specific breakdowns as required. Some have been known to keep in constant touch with panel members to assure an accurately active and properly classified list. Professional research organizations also maintain such selective panels which may be used for specific questioning as part of the services of these organizations. There are also sources through which panel lists may be purchased. Panels have come nearer to providing accurate sampling of opinion than is obtained by the house-to-house or street interview, where much effort may be wasted or misdirected because of mis-aimed targets.

Bristol-Myers used a panel of known deodorant users—both spray and cream types—in testing its new lotion deodorant, "Ban," in the new roll-on dispenser package.² The company wanted not only to know how consumers liked the product, but to find out how the package functioned. Panel members were sent blind samples of the packaged product to try. In return for the sample they were

asked to answer a few questions. The panel tests were a good indication of acceptance of the new dispensing container—certainly sufficiently convincing to proceed with larger production for market tests.

Most firms are agreed that it is comparatively easy to get reliable consumer reaction by opinion methods to the functional aspects of a container. A manufacturer of a leading household cleaning powder, for example, determined that it was advisable to change the size of the shaker-hole perforations in the cans by asking known groups of users, among other things, whether they found the product, "easy, poor or difficult" to dispense.

7. Color and imagery tests. Experience and observation have shown that color is one of the deciding factors in package-design preferences. Color, therefore, is one of the first considerations in package planning, selected on the basis of such essential factors as: whether consumers like it, whether they remember it and whether they associate it with the product. Of recent years a great deal of statistical data has been collected by professional research organizations on color preferences which can be employed as guides to color selection. It is known, statistically, that people prefer some colors and dislike others, that there are differences in preferences between men and women, that certain colors have higher visibility than others. This information is available through organizations specializing in this type of research and in certain publications dealing with color. It can be employed

² See "Roll-On Deodorant," MODERN PACKAGING, Jan., 1955, p. 80.



PHOTO COURTESY ALFORD CARTONS DIV., CONTINENTAL PAPER CO.

SUPPLIER FACILITIES are often available as aids to a research program. Here is a supermarket set up in the product development department of a carton manufacturer, where a client may observe his packages in relation to others as they would appear on the retail-store shelf.

effectively in the selection of package design, but, of course, must be related to competitive conditions, store lighting requirements, the characteristics of a product, its uses and its market. If all competing packages in a product group begin to look alike, then it may be time to redesign your package to achieve new shelf distinction.

Likewise there is considerable statistical data available on what is known as imagery—that is, design shapes and forms that people like or dislike and which may or may not have strong memory and association value. It has been quite conclusively determined, for instance, that an oval has a higher preference rating than a rectangle.

8. Instrument tests. Optical ratings of package design by the use of instrument tests have received considerable attention as a means of determining shelf visibility and legibility of designs as well as eye travel over the various elements of a design. In making these tests, for example, the observer will be asked to look at a color slide in a projector where the photographic image is changed from sharp focus to blur and asked to indicate at what point during the change legibility and recognizability disappear to him. Quite convincingly the strong, sharply defined design without clutter will continue to be recognizable even when the image is almost completely

out of focus. Clear, bold type will also continue to be readable for the longest period of time and at the greatest distances.

Instrument tests are also used to measure eye travel over a design and notable design modifications have been made as the result of such tests—for example, the bold, upward sweep of the check-mark element on the current package for "Veto," Colgate's cream deodorant.

9. Indirect techniques and motivational research. Not so many years ago, the Quaker Oats Co. changed the trademark of the full-length figure of

a Quaker used for more than 60 years on its packages to a head-and-shoulders symbol currently used. Before the change was made, the company reportedly asked consumers if the change should be made. About 89% replied, "No, don't change."

General trends in package styling to meet modern merchandising requirements were a definite indication to management, however, that it was time for a change. With this supposedly general consumer opposition to change, the company felt it did not want an abrupt change-over. Instead, just one product was marketed initially with the new trademark on the package. The product was a success. People bought and at the same time became familiar with the new Quaker, which gradually found its way to all Quaker packages.

Had a progressive company like Quaker Oats listened only to what consumers said, the change might have been delayed indefinitely. Little progress or improvement would take place if manufacturers were content to go along in the same old comfortable groove. There is a time for the bold steps which consumers, if asked, would say not to do.

Proponents of psychological research maintain that new methods get beyond the conscious answers that people give in opinion testing. They search into patterns of human habits and behavior to bring forth the *real* answers. The thesis is that people cannot or will not tell you how they think, how they feel or how they react, due to certain voluntary reservations, such as wishing to appear

CONSUMER ACCEPTANCE of Lever Bros. Lux Liquid Detergent in convenient round, non-drip can verified company's research that housewife would like non-breakable container. Lux Liquid is reportedly overcoming lead Procter & Gamble's Joy has enjoyed for five years.



well in the eyes of the interviewer or for fear of going contrary to majority opinion.

Examples show how false results can be obtained when ordinary opinion research is used in packaging. Large groups of consumers were asked to select which of three designs they liked best. Some 62% chose the most ornate design; 25%, a slightly less ornate design; only 12%, the simplest. Yet on the shelf, 72% bought the package with the simplest design printed in three colors; 16%, the slightly less simple one printed in five colors, and only 11% selected the most ornate, six-color design.

False and contradictory results from opinion research have attracted marketing men to new kinds of research, supposedly capable of adding more qualitative data to the quantitative.

This interest is leading to the development of highly skilled new methods of research called by such terms as psychological research, mass motivational research, indirect research. The techniques attempt to find out what is really in the consumer's mind. They have been used for years by clinical psychologists, but only recently have begun to be applied to selling problems.

The tools include sentence-completion tests, word-association tests and the balloon test (a picture in which two people may be conversing, with a question coming from the mouth of one, as in a cartoon, and a blank space in another "balloon" for the respondent to give the answer in the words he would attribute to the other character in the picture).

This kind of testing is reportedly still suspect in some quarters, because so much depends on the integrity of the organization conducting the studies and the skill of the interviewers, who must be trained in the psychology of personality.

The key to such studies is sometimes found in "depth interviews," conducted by experts with a relatively small group of 20 to 50 people. From these depth interviews emerge certain trends and findings that supposedly yield the hypotheses which can often be worked into a form for testing a large sample of respondents by less-expert interviewers.

One research firm in this field reports that it has conducted 178 packaging tests for major companies.

It classifies the procedure as real-

istic rather than controlled—and in terms of field observation. The package is studied in its entire context in the market place, rather than by visual observation. What is looked for is the entire psychological complex of reactions to the package.

At present this research firm is engaged in a major study of the way a package is chosen. The procedure is as follows:

Samples of packages of various well-known brands of breakfast foods are placed on the shelves of a laboratory supermarket. Samples of both old and new packages of cereals are tested.

Children from the ages of four to 12 and young mothers are taken individually through the supermarket and told to choose the breakfast food they want. Following the choice, the respondent is directed to an office, where a staff psychologist conducts a "depth interview" on the package choice.

Another procedure used by this research firm has been conducted in an actual supermarket. A special checkout counter was set up on which a board was marked off to show the reasons for specific purchases. The board was divided into four categories. The respondent was asked to put her purchases in proper category on the board marked, "Planned by kind," "Substitute," "Reminded by brand or by kind" and "Just saw it."

Depth interviews were conducted on these package choices, recording responses for analysis in the research center.

The interview used the packages as projective stimuli. The progress of the interview was as follows:

A. *Free association.* The respondent was asked to look at the box being tested and encouraged to say anything at all that came into his mind.

B. *Story.* After the respondent's free associations were exhausted, he was asked: "Look at the box and make up a story for me." Such probing was used as was necessary to elicit a free and uninhibited projection of the subject's reactions to the box in story form. Such third-person projections reportedly have the advantage of permitting the respondent to express his feelings without fear.

C. *Color.* Respondents reactions to color were investigated by such questions as, "When you look at the box, how do the colors make you feel?"

D. *Personality.* As an expression of



DESIGN, FRANK GLASSNER CO.

WITHOUT RESEARCH, the Borden Co. put the "Elsie Daisy" symbol on packages. Elsie's promotional value had been proved. Management and designer knew by experience that symbol had proper imagery and color for association and memory value.



PANEL OF 1,000 mothers regularly using baby cereal determined that mothers like new 80-deg. pour-spout opening on 8 oz. Gerber packages better than 45-deg. one. Large opening provides pouring space for nearly a 1/4 circle in comparison with smaller opening of 1/8 circle.

personality of the package, respondents were questioned as to what kind of person the box brought to mind.

E. *Slogan.* The meaning of the slogan on the box was probed.

F. *Choice imputation.* The respondents were asked which box their mothers, fathers or other people would choose.

While relatively little of this kind of study so far has been applied to (This article continued on page 190)

Acetate boxes from a new machine

NEW BOX COVER for Traum marking-pen and name-tape set is made automatically, using electronic-sealed corners. Note narrow flap, fastened securely by welded seam only $\frac{1}{16}$ in. wide. Two halves of the telescoping plastic box can be made in the same way.



For years, many packaging men with low-price products have looked longingly at transparent acetate boxes. Such packages offer just the kind of protection and visibility which so many products could use to advantage, but the big problem has always been their cost—not so much the cost of materials as that of labor.

The first move toward cost-saving automatic production of acetate boxes came nearly eight years ago, when a large machine was developed¹ which, by a straight-line sequence of cutting, blanking, creasing and solvent-sealing operations, could turn out box halves

from roll stock. But this machine required a sizeable investment by the box maker and thus proved economical only for very large runs of single-size boxes—larger runs than most packagers interested in this type of package ordinarily could use.

Now a new machine which has been in the process of development for more than five years² is getting into commercial operation. Prospective users of low-cost acetate boxes have for some time been carefully eyeing its progress and waiting for it to be tested under production-line conditions.

This new machine, also fully auto-

¹ See "Automatic Machine for Making Plastic Set-up Boxes," MODERN PACKAGING, June, 1947, p. 102, and "PermaHues on View," MODERN PACKAGING, May, 1948, p. 132.

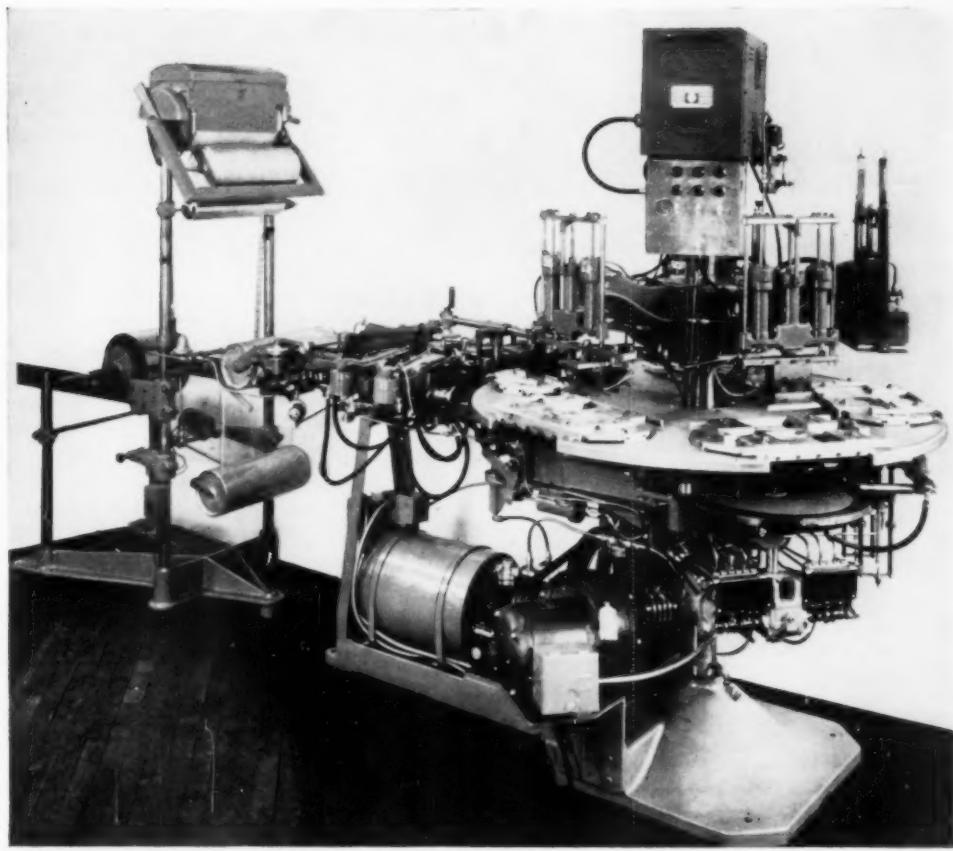
² See MODERN PACKAGING, March, 1952, p. 241.

matic and capable of high-speed operation from roll stock, differs from the previous one in several important aspects.

- It uses electronic sealing to form neat, strong corners. Up to now, an acetate box cover with this type of welded corner could not be produced automatically; it could be done semi-automatically with special equipment, but this was a relatively slow operation.

- It has an important advantage in that it can print or emboss with gold or colored leaf as one of the stages in the box-making operation.

- Changing from one size of box to another is a fairly simple and inexpensive procedure, requiring the use of



NEW AUTOMATIC BOX MAKER stresses simplicity and low cost, turns out Traum covers at rate of 900 an hour. Roll acetate, slit to proper width, is fed in over rollers at left, blanks are die cut and the boxes are formed, printed and sealed on a revolving five-stage turntable (right).

one metal form plate for each size.

• Most important, as far as the machine's possible widespread future use is concerned, is the fact that it is a simpler, less elaborate mechanism, costing only about one-third as much as the first automatic transparent-box maker.

In one of its first practical tests, the new machine is now turning out a simple 4-by-5-by- $\frac{1}{2}$ -in. acetate cover at a 900-per-hour rate for the David Traum Co., New York, to be used on a set-up paperboard base containing a marking-pen and name-tape set. These covers feature the tiny electronically welded end flaps which are said to produce a stronger, better looking box. And the new covers are costing Traum no more than those made by any other method. Eventually, they should cost less.

Although Traum is using only this one kind of cover, the machine can as readily be used for producing rigid acetate covers to go on top of all sorts of paperboard set-up bases or plat-

forms, or for boxes made up of two telescoping acetate halves.

A little more than two years ago, Traum decided to overhaul its whole packaging program³ in an attempt to increase the visibility of the company's many small products on the crowded notion counters in variety stores. Most of the items in the Traum line—mending fabrics, patches, thread, etc.—could be packed in envelopes of paper or transparent film, or attached to cards. A more complicated problem was presented by the combination marking-pen and name-tape set.

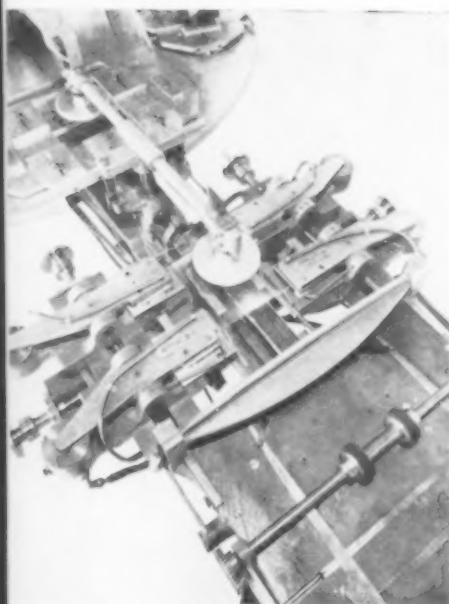
Since this is not exactly a standard item which customers would be looking for as they wander through a five-and-ten, it had to be visible and it had to sell on impulse. But at the same time, two other requirements were presented by the package to be used: a certain amount of protection was needed, since both marking pen and name tape could be soiled by customer

handling; and a semi-permanent container was desirable, since one such set will usually last quite a while.

These merchandising requirements seemed to point towards the use of a shallow box with a set-up paperboard base and transparent cover, holding a die-cut platform which would have places for the pen and 360 in. of tape. This was topped by a semi-rigid transparent telescope cover fabricated from acetate, which protects the contents, yet gives 100% visibility.

This kind of package has been successful in doing the job which Traum hoped it would do: increase impulse sales. And, a few months ago, the company was pleasantly surprised to find that it could get a sturdier, more attractive box for the same price it had been paying for one with conventional hand-glued, solvent-sealed corners. In the past, a certain percentage of these glued corners always came apart; now this problem has vanished. Both better strength and better appearance are the result of electronic

³ See "Salesworthy Notions," MODERN PACKAGING, Jan., 1953, p. 122.



BLANKS ARE CUT at this first stage of machine's operation. Web of acetate rolls in from lower right, blank is sliced to size by a knife and corners are cut out by four adjustable blades (center). On next cycle of machine, blank is lifted by round vacuum head on one end of swinging arm and positioned on revolving table (rear left).

sealing; stability of price is the result of using a high-speed automatic machine that one girl can run. The production level now is relatively low, but as the demand for this type of cover increases, it seems likely that prices will be decreased enough to make it the most inexpensive rigid acetate package on the market.

Electronic sealing eliminates the "ears" needed to hold the solvent used to fasten corners in the ordinary method of sealing acetate.⁴ Instead, a welded seam, made by fusing two pieces of material together with high-frequency radio waves, fastens each of the corners. This seam is only $\frac{1}{16}$ in. wide, yet it is actually stronger than the material itself. Also eliminated by electronic sealing is the distortion of box shape sometimes caused by the cementing operation, along with the odors sometimes produced by solvents.

More extensive use of this kind of sealing has been blocked for some

⁴ See "Electronic Box Stayer," MODERN PACKAGING, Feb., 1948, p. 113, and "Sealing by Electronics," MODERN PACKAGING, July, 1948, p. 78.

time by the relatively slow speeds with which electronic welding could be performed. Each of the four corners of a rectangular acetate box had to be fed separately by hand into the jaws of a sealer. At best, only about 300 boxes an hour could be formed from die-cut, pre-creased blanks in this way. But the new automatic box-making machine, using roll acetate, can work at three times that speed.

The entire operation of this new machine is automatic. Once it has been set up for a desired box size (a process taking about 2 or 3 hrs.), it cuts, folds and seals the box without further attention. One girl can gather and stack the finished boxes as they come out of the machine and change acetate rolls every three or four hours. Since the boxes are produced automatically, each is exactly the same as all the others and waste occurs only from the material cut out of the four corners. Rejects amount to only from 3 to 5%, it is said. In contrast, a non-automatic production line requires the services of three or four girls and, with the human-error factor ever present, rejects are usually higher. And this kind of line can operate at only about half the speed of the new automatic machine.

The machine itself is a relatively compact one, taking up floor space of only 4 by 12 feet. The boxes are formed and sealed on a five-stage rotating aluminum table 4 ft. in diameter. This is turned by a gear reduction motor at a constant speed of 15 revolutions per minute. The compressed air which is used may be taken from either the regular box-plant system or a separate compressor.

Rectangular or square boxes—either all-acetate telescoped containers or acetate tops to fit onto set-up paper-board bases (like the one being used by Tram for its marking set)—can be made, ranging from a minimum size of 4 by $\frac{3}{4}$ by $\frac{1}{2}$ in. deep to a maximum of either 10 by 6 by 2 in. deep or 8 by 4 by 3 in. deep. Change-over from one size to another can be accomplished by inserting a new form plate and making a simple series of adjustments. If desired, flat sheets cut to size (up to 14 by 10 in.) which have been printed with special colors or designs can be hand fed, instead of using roll stock.

Here, in brief step-by-step summary, is how this new machine works:

1. Standard cellulose acetate sheet in roll form, in 0.005, 0.0075 or 0.010

gauge, is used. (About 95% of the boxes of this type are made from 0.0075-gauge acetate sheet.) This roll stock is customarily purchased by the box manufacturer slit to a width corresponding to the long dimension of the box blank.

2. The film passes between two rollers, one of which is electrically heated to remove any curl which the material may have acquired from being rolled up for a long period of time. This decurler is necessary to make sure that all blanks will feed properly during the succeeding stages of operation.

3. Next, a knife cuts each blank to its shorter dimension and the four corners are die cut. Corner laps are cut to a standard width—they must only be wide enough to hold the $\frac{1}{16}$ in. welded seam—which is never changed, whether the finished box is to be $\frac{1}{2}$ or 3 in. in depth.

4. On the next 4-sec. cycle of the machine, the blank is lifted by one of two vacuum heads at the ends of a metal arm, rotated 180 deg., and set in position on one of the five identical stages of the turntable. The movement of this arm is synchronized with that of the table and it feeds new blanks continuously onto the first position of the table.

5. The blank then moves, as the table makes a one-fifth revolution, beneath four electrically heated elements which have been pre-set to conform with the location of the four corner laps. When the elements are lowered onto the narrow laps of the blank, the heat causes them to fold up into position.

6. This done, the machine cycles again and the blank is moved into position under a plunger upon which is mounted an electrically heated form that conforms exactly to the desired score lines for the top of the box. When the heated plunger strikes the blank, the four walls of the box are bent up and formed at right angles to the base. Both this plunger and the heated elements used in Step No. 5 to form the corner laps are controlled by thermostats to keep them from becoming overheated and injuring the acetate.

7. With the next rotation of the turntable, the partially formed box is brought into position to be imprinted with gold or colored leaf, which can be fed off a roll and affixed to the box by a heated die which stamps down from above. A heated die may also be

used at this stage to emboss a raised design on the box's surface or, as in the case of the boxes used by Traum, this printing or embossing operation may be omitted.

8. At the last and most crucial stage of the box-making cycle, the blank is raised by a vacuum head and the four corners are sealed by dielectric heating units, which also have been preset to fit exactly onto the four corner laps of the box. The finished box is then lowered and ejected by a blast of compressed air.

The electronic welding in this last stage is performed by high-frequency current produced by a generator enclosed in a metal cabinet located at the top of the machine. The current flows to knife-like electrodes in the four sealing jaws. When these close over the corners of the box, the current is automatically turned on for the span of one-quarter second. A very intense heat is built up inside the acetate itself, although the electrodes remain cool. The heat is produced when the high-frequency radio waves cause molecular friction in the material at

the points of contact. The electrode blades themselves actually chill the surfaces of the acetate and prevent the outer edges of the material from melting and becoming sticky. After the brief sealing operation, the raised seam cools almost immediately.

Although setting up the machine for a new size of box is a relatively simple process, it must be done precisely. Once this is accomplished, however, every box which is produced will be identical in size and shape. For each size he wishes to make, a box manufacturer obtains (at a cost of \$25) from the machine's manufacturer the metal form used in Step No. 6, cut to fit the score lines of the box. With it he also gets a phenolic plastic setting form, slightly larger in size (to account for the factor of expansion and twice the thickness of the acetate, plus a 0.005 clearance normally allowed in setting the machine). This form is then used to set in correct position the five stations on the turntable, the corner cutters, the heating elements for folding and the electrodes for sealing the corner laps. All this usually should not

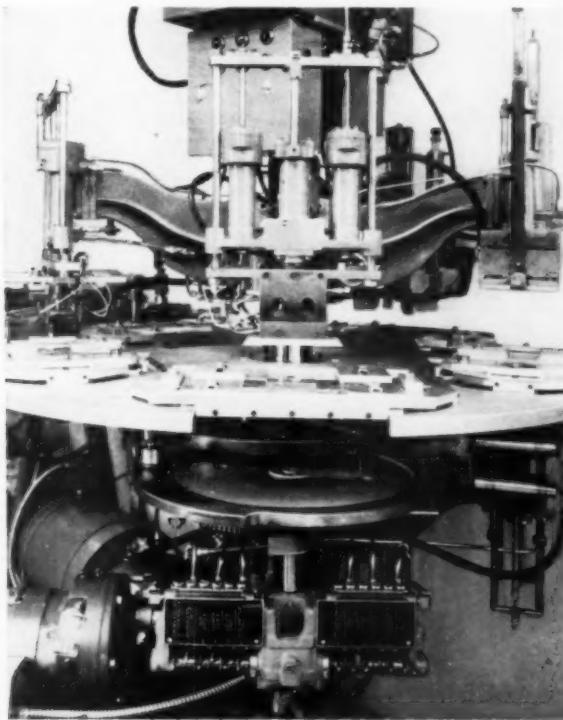
take longer than 3 hrs., says the machine's manufacturer.

The box-making operation is not complicated; it consists of a series of quite simple steps. Each of these stages is guarded by safety switches and faulty operation usually can be quickly detected and corrected, since all of the working parts are easily accessible.

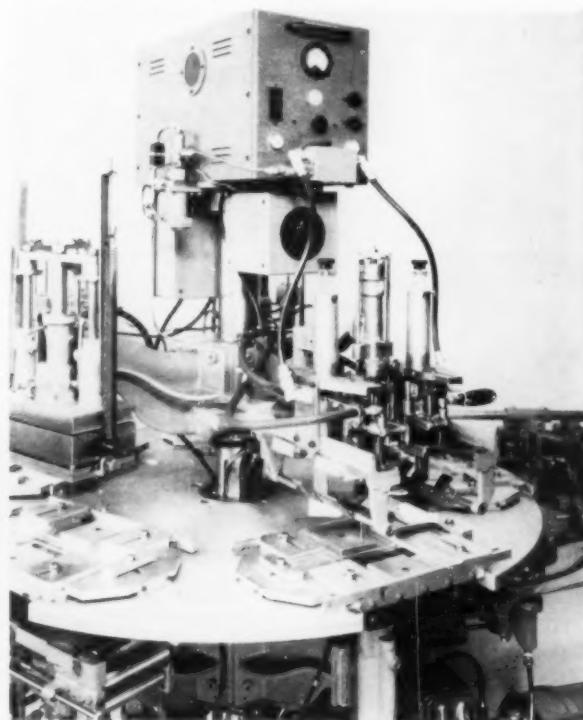
Traum feels that the box covers which this machine is turning out are both stronger and better looking. No longer is there any problem with corners that come unglued. Better quality alone, Traum officials say, justifies the use of the automatically produced boxes.

CREDITS: Acetate covers produced by Container-Craft Co., 31 W. 21 St., New York 10, using "Vue-Matic" automatic box-making machine developed and made by High Production Machine Co., Div. of E. G. Staude Mfg. Co., 2675 University Ave., St. Paul, Minn., and cellulose acetate by Monsanto Chemical Co., 812 Monsanto Ave., Springfield 2, Mass. Set up paperboard bases by Niagara Box Factory, 710 E. 13 St., New York 9.

CORNERS AND SIDES are formed in next two stages. At left, heated elements come down to fold up narrow corner laps. Next, when blank reaches position in center of this picture, heated form, cut to exact dimensions of score lines, plunges down to form four sides of box. Next stage on machine is used for optional printing or embossing.



ELECTRONIC SEALING is the final, key stage in the process. Box is raised so that its corners fit tightly against the four electrodes. High-frequency current from the generator at top flows to electrodes and seals acetate into a solidly welded seam that is stronger than the material itself. The finished box is then lowered and ejected by a blast of air.



Canned foods

The sterile-processed food container is one of the dozen great conveniences of the modern world. Little wonder, then, that the statistics of the canned-food field are towering. The "tin" cans and glass jars used by the canning industry alone package, protect and help merchandise more than one-twelfth of the nation's total food supply—or approximately 20 billion pounds of the 250 billion pounds of food consumed by the best-fed 160 million people in the world.

The social and economic impact that canned foods have made on our way of living is profound and far reaching—in the same way as are the changes brought about by automobiles, telephones, hot and cold running water and electric appliances. The canned food was undoubtedly one of the precursors of our age of efficiency. It started the whole business of consumer packaging as we know it today. It is still, in point of volume, the foremost of all packaged convenience foods.

The canning of food started with Nicolas Appert's famed discovery of hermetic sealing and hot processing in France during Napoleon's time. The canned-foods industry was born in this country in Boston around 1819 and became commercially important during the decade from 1850 to 1860. It thus anticipated many of the principles as well as much of the promise of mod-

ern packaging by as many as 50 to 75 years. Canned food was one of the real pioneering points of departure for an era seeking new ways to efficiency and time-saving convenience. And because civilization, like an army, travels on its stomach, the canned food has played a dominant part in the rise of modern living.

Economically, the American canning industry is immense. The retail value of the canner's product is estimated at \$4 billion a year. More than 500 different foods are canned by some 3,500 canneries operating in 47 states and all the territories, using, in 1953, approximately 18 billion cans and 2 billion glass containers. In addition, of course, billions of metal and glass containers are used for foods not preserved by canning, such as spices, jellies, jams, nuts and the like.

The geographical distribution of the type of packaging known as canning is readily summed up in such familiar terms as Alaska salmon, Hawaiian pineapple, Wisconsin peas, New Jersey asparagus, California prunes, Michigan cherries and Maine sardines—all made available throughout the country by means of cans and glass containers. The tomato can and the ketchup bottle could well qualify as national symbols—for they are as typically American as Huck Finn or a Fourth of July picnic.

Synonymous with good eating and

good living are such names and trade characters as Heinz pickles, Campbell's soups, the Green Giant, Donald Duck, Dole, Libby's, Del Monte, Stokely, Ritter, Ann Page, Beech-Nut, Crosse & Blackwell and Chicken of the Sea.

Economic progress

There are valuable rediscoveries to be made in examining the characteristics of processed-food packaging—either in the tin-steel sanitary can or the glass jar or bottle. (In this article, generally, the expression "canned foods" is meant to cover food sterilized by heat and hermetically sealed in metal as well as in glass containers.)

The canned-foods field, which packaging serves so well, has increased its production efficiency continuously. The index of output per man-hour rose from 111.1 in 1947 to 149.3 in 1952 (1939 = 100). As a result, canned-food prices have consistently appeared at or near the bottom of the retail price index. For example, the all-commodities index in Nov., 1954, stood at 191.6 (1935-39 av. = 100); the all-foods index was at 224.4 and the canned-fruits-and-vegetables index was only 165.4.¹

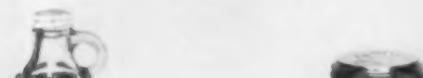
Today it is reported that the average citizen buys almost twice the quantity (191%) of canned foods with his weekly income as he could buy during the years from 1935 to 1939. Per-capita consumption of canned fruits, vegetables and juice has risen from 60 lbs. in 1938 to an estimated 110 lbs. in 1954. Cans deliver one pound of food out of every dozen that reach the American table—but the consumer pays for canned foods only \$1 of every \$16 spent for food. The over-all food bill being \$65 billion and the canned-foods bill \$4 billion of that, the all-foods cost averages an estimated 26 cents a pound, but the canned-foods average cost is only 20 cents.

Now this is a highly significant factor in favor of the 100-year-old canned-foods industry. It helps explain why the production of canned foods during the last 20 years has increased,

¹ Source: Bureau of Labor Statistics and Statistics Div., National Canners Assn.



TIMELESS protection is afforded by hot-process canning. Here W. R. Olney tastes corn from can packed 63 yrs. ago by Fredonia Canning & Mfg. Co. when he worked for its parent company in Rome, N. Y. His granddaughter Susan—a half century younger than the can—assists in test.



The oldest form of consumer packaging today
measures its progress in the tens of billions
of metal and glass containers used each year



MAINSTAY of every food store is the important canned-foods department. This type of mass display, with the cans arranged in tilted stacks without the use of shelving, has been pioneered by Thorofare Markets of Pittsburgh.

on the average, about 100 million cases every five years.

Progress in cans during the war and postwar years has been most impressive. Wartime conservation of tin led to new electrolytic and "differential-coating" tinplating processes. As a result, over-all tin requirements per can have been cut practically in half. In addition, some 20 different formulations of waxy or plastic can linings have been devised for products that cannot successfully use tinplate alone,

thus extending the range of practicability to additional products.

Improvements in glass containers have also been outstanding. Today's glass jar or bottle is lighter in weight, yet stronger, thanks to advances in design and manufacturing processes.

Although metal and glass containers are frequently interchangeable insofar as the choice of package is concerned, today's precision methods in merchandising generally tend to establish clear-cut areas of preferred performance.

Glass excels on the score of inertness, visibility and re-use. Metal is superior in regard to nonbreakage, lower tare and greater practicability over a wider product range.

Along with advances in containers have come important improvements in closures, liners, seals and gaskets. The shrink-on cellulose band has won popularity as both a seal and a label for glass food containers.

The typical high-speed packaging line for canned or glassed foods has



EVOLUTION of a super-selling glass-packed food, from jug at left to smart table-size decanter illustrated at right with its cellulose neck band that serves both as a seal and a label for Ritter tomato juice.

long been recognized as a pace setter for the packaging field as a whole. Speeds as high as 600 or more units per minute have been widely achieved. Recently new, high-speed, precision can filling and closing machinery capable of the phenomenal speed of 1,000 cans per minute has gone into operation.

There have been many other innovations equipment-wise. Unscramblers, palletizers, de-palletizers, case packers, improved filling machines, carry-home carton fillers, machines that band two cans together, improved labelers and new automatic machines that apply cellulose seals are representative of the forward steps machinery manufacturers have made possible. The mechanization of the super-high-speed food-

packaging line has, of course, played a significant part in the remarkable productivity gains achieved by canners. In step with all the technological advances in containers themselves, the canners have made giant strides in the development of better canning techniques. The American homemaker is continually being provided with finer-flavored canned foods, affording greater nutritional value, offered with an ever-better array of taste-tempting appetizing recipes.

Progress in canned foods shows no signs of slackening. In the offing are such promising—but yet to be proved—developments as the new aseptic process; studies of canned-food nutrition and vitamin restoration; and experiments in "cold sterilization" of

canned foods by various forms of radiation, including that from atomic-fission products.

"Automatic" selling

The metal-can and glass food container as vehicles for self-service helped make possible the revolution that has occurred in food distribution and marketing. However, these containers, despite the fact that they were basically right for self-service, did not become self-selling packages merely because packagers called them by that magic name or sent them off to retailers with the hope they'd automatically reach the check-out counter.

Today's canned-foods packages offer powerful examples of streamlined selling effort concentrated in a small area. For example, the wrap-around label on a 15½-oz., No. 303 can is 4 in. high and 9½ in. long, providing space elements generally designated as "front" and "back" panels plus two "side" panels. The maximum effective label area presented during shelf display is actually only about 16 sq. in., or an area the size of a hand. Yet a typical label will provide about 15 individual elements required to make up the complete self-service sales story, usually including a tempting color illustration and a kitchen-tested recipe.

The canned-foods labeler may properly be credited with inventing the technique known as appetite appeal. He long ago discovered the sales magic of full-color realism in illustrating the

From field to freight car, canning

PHOTOS COURTESY HAWAIIAN PINEAPPLE CO.



MECHANICAL HARVESTING of pineapple in Hawaii for Dole.



WASHING the fruit on conveyors prior to slicing.

goodness of his product. He learned that the best label his money could buy was also the cheapest, surest road to sales. He learned how to present the essential facts that the self-service customer needs and how to condense these facts into a compact, irresistible label message as terse as a telegram, yet as inviting as a modern ad in *Good Housekeeping* or *Saturday Evening Post*.

More than a little credit for this efficacy of the modern canned-food label is properly attributed to the Food and Drug Act of 1938, which encouraged a greater uniformity, completeness and accuracy of labeling information. This made it easier for the shopper to identify, compare and choose canned foods. Easier package selection, made with greater confidence, is certainly one of the reasons why per-capita consumption has risen so spectacularly.

As just one example of the power of modern labeling techniques, there has been recorded the experience of one specialty food which, when it converted from an old-style to a modern appetite-appeal label, recorded a 1,500% sales gain.²

Modern labeling practices of major canners usually carry through to supporting materials such as store posters, shelf talkers, price cards, corrugated shipping containers and all the components of *total promotion*.

² See "Really Hot Tamales," MODERN PACKAGING, March, 1954, p. 163.

GRAPH COURTESY NATIONAL CANNERS ASSN.
PRODUCTION OF CANNED FRUITS, VEGETABLES, & JUICES



INCREASED DEMAND for canned foods has far outstripped our gain in population. Production has increased approximately 100 million cases of canned foods each five years in the 20-yr. period since 1935.

Modern merchandising shows a vast change in the design treatment of labels. Many of the old-fashioned "gismos" that were thought so necessary to give a brand authority and reputation have been edited out in redesign. Gone are those little seals with Indian heads or eagles or cartouches with a picture of the factory displayed on the label.

Greater freedom has at the same time been given to the designer to express the atmosphere of the contents in the character of his design, es-

pecially if the contents carry any kind of tradition.

A striking new example of this is to be seen in the current label design recently adopted for Hilton's seafood products. Modern as the label is, the design theme is reminiscent of the conditions under which the oyster was consumed at the turn of the century by such famous gourmets as Diamond Jim Brady and the more delicate Anna Held. The atmosphere is one of candlelight reflected in roccoco mirrors, heavy palms—and a string quartet ac-

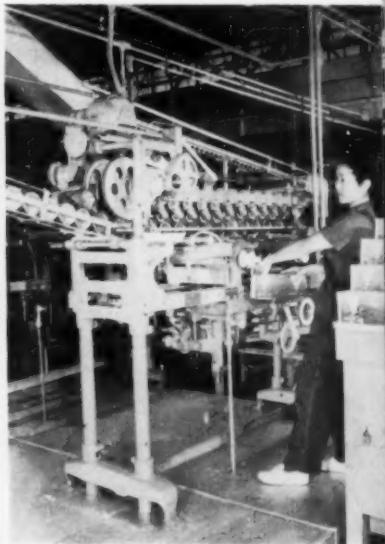
is a marvel of mass production



HAND PACKING slices in cans.



COOLING cans after sealing and hot processing.



LABEL applied, cans move on.



PHOTO COURTESY CONTINENTAL CAN CO.

MERCHANDISING gets a lift from ideas like this. Can of sauce rides piggy-back atop larger can of vegetable mixture for Chinese dishes. Can, attached by pressure-sensitive band mechanically applied, makes complete "convenience meal." Note appetizing label—typical of almost all today's canned foods.

companying the pop of champagne corks. The Hilton's label carries the feeling of this more elegant period, but with allowance made for simplified, contemporary taste. The design scores an advance both by its desire to be editorial and in its process of manufacture. It is an expensive label to produce, but the rapid growth of sales is justifying the production cost. It is lithographed in three colors—red, light

blue and dark blue—and embellished with gold that has been burnished and embossed. The paper is 60-lb. cast-coated stock that adds lustre to heighten the feeling of elegance which the label imparts.

Perhaps the most significant general trend recently in labels is the use of the recipe pictorial, which gives the consumer a sales plus with every purchase and adds immeasurably to the container's shelf appeal. The recipe pictorial, beyond its service or goodwill function makes use of millions of dollars worth of the canner's most valuable advertising space that might otherwise be wasted by a repetition of the front format.

Merchandising

The importance of the canned-foods section in the grocery store is largely taken for granted by the shopper. Yet it is unquestionably the nucleus around which have been drawn the produce, baked-goods and numerous specialties departments to form the modern supermarket. In fact, the canned-foods section is the one department that could not possibly be eliminated or de-emphasized in the self-service food store.

The super-selling qualities of canned foods are well summarized in the following statement by L. B. Smith, president of Thorofare Markets, a \$60 million chain of supermarkets in western Pennsylvania.

"Canned foods," Mr. Smith reports, "are the net-profit backbone of our supermarkets. Because of low handling

costs, no refrigeration, no high labor cost and steady demand, canned foods earn more for us in net profits than any other departments. Turnover on canned foods is extremely high; it responds to unlimited increase in turnover ratios and we constantly stress the fact that whenever we can double our turnover, it is just like having two stores for the cost of one. We believe that it is more practical to increase turnover and net profits from canned foods than from any of our other departments."

Canned foods—because they are basically one of the most merchandisable of all types of packages—have helped write the book on shelf stocking, displays, deals, tie-ins and special promotions. For this reason, the canned-foods section in a supermarket is often a veritable circus of banners, posters and jumble displays that add a flavor of excitement and bargain hunting to a tour of the food store.

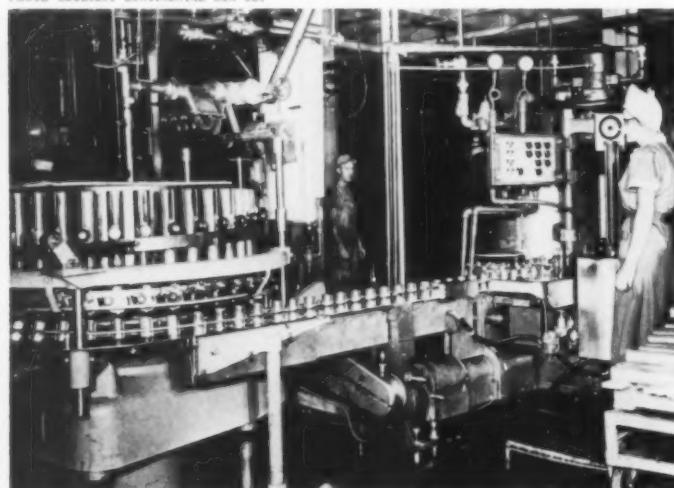
The ingenious promotions conducted by the individual distributor or processor are only part of a mammoth continuing program of consumer education and motivation.

The National Canners Assn., one of the country's largest and most active trade associations, has long been engaged in intensive programs dealing with the promotion of canned foods. These programs are continually strengthened by support from the association's many other activities, including studies in menu making, recipe testing and nutrition, plus a far-reaching program of research and development into the methods of food canning.

The effect of the promotional effort supporting canned food is intensive and takes place around the seasons. The results, of course, are well reflected in the skyrocketing gains of total pack and in the near doubling of per-capita consumption of canned foods in the last 15 years.

Typical of the interest shown in canned foods as a factor in modern living is an article in the February issue of *Seventeen* magazine. The theme is "Teen Cooks Love Canned Foods." This current tie-in promotion takes on added interest when it is recognized that canned foods are most popular with young homemakers. Today's 7½-million teenagers, according to *Seventeen*, help plan and prepare an impressive portion of the family's meals. These young homemakers of tomorrow are already learning the

PHOTO COURTESY CONTINENTAL CAN CO.



HIGH SPEED of canning operations hits a new peak with this 1,000-per-minute can filling and closing equipment which is currently in use at the Leamington, Ont., plant of the H. J. Heinz Co.

facts about convenience foods and time-saving, self-selling packages.

A round-up of the merchandising contributions that have been made by improved canned-foods packaging would be endlessly long, but the following are some of the "new directions" to watch:

The multi-unit carry carton, which has taken such a strong hold on the beer and beverage field, has begun to make its advantages known in the canned-foods field. The carry carton appears to be a natural for enlarging the unit of sale and for automatically extending brand promotion.³

The banding together of two or more cans for "deals" by means of tape applied automatically is also a packaging development that extends the canner's merchandising horizons. It permits complementary two-product deals, such as Chinese noodles and chop suey, and is ideal for two-for-one and similar deal or sampling offers.

The easy-opening, tear-strip shipping carton, with its many retailer advantages, has been a major packaging advance for canners.⁴ The corrugated and solid-fibre shipping container, has, of course, contributed enormously to better distribution and handling of canned foods. Improvements in board quality and in printing methods have produced new standards of shipping-container performance that are part of the advancement in the total merchandising gains canned foods have made.

Potentials

It requires little arithmetic to show that one of the biggest areas for growth in the entire field of packaging lies in canned foods. Canned foods this year will require approximately 10 billion more containers than were needed in 1938. A new market of this size, developed in less than 20 years, is staggeringly large, even in the fabulous field of packaging.

Will processed foods grow sufficiently to create another 10-billion-container demand? Certainly, if any segment of the packaging field offers an opportunity for growth of such titanic proportions, none would be more promising than canned foods.

The use of canned foods, of course, is rising. As national income increases, so does canned-food consumption. Actually, every economic index points to higher per-capita consumption plus

³ See "The Carry-Carton Spreads Out," MODERN PACKAGING, June, 1954, p. 93.
⁴ "Swing to Tear-Strip Cases," MODERN PACKAGING, June, 1954, p. 116.



PIE FROM A JAR or can fits tempo of today's demand for convenience in food preparation. Canners were quick to take advantage of this basic trend. Transparency of glass aids eye-appealing products.

higher "holiday" spending for canned foods.

In fact, population growth alone will create a 15% rise in total food consumption in the next decade. Because the trend in America is to eat more, the demand for food may thus rise by 18 to 20% during the next 10 years.

The American love of efficiency is another factor favoring increased demand for canned foods. As the pace of living speeds up, the housewife is (This article continued on page 189)



CARRY CARTONS offer a big new potential for multiple sale of a variety of canned foods.

PHOTO COURTESY SCHNEIDER LITHOGRAPH CO.



DESIGN FREEDOM today permits departures like this—an elegant embossed, bronzed and burnished three-color label on gloss stock, with "gay '90s" cartouche, establishing character for a gourmet food.



COLOR PLATES COURTESY CALIFORNIA PRUNE & APRICOT GROWERS ASSN.

NEW DESIGN adds the appeal of realistic full-color product reproduction to familiar foil glitter of Sunsweet wraps. Note how lighting of color photograph gives effect of actually looking in the package.

SUNSWEET'S SWITCH

It proves that even a great package can be made still better:
more impact, more color, stronger identity, greater taste appeal



TASTE APPEAL is reinforced by luscious color photography of prepared dishes. Despite menu-card format, Sunsweet suggests only the dish, not the recipe.

Introduction last month of the new packages pictured here raised more than a few eyebrows in the food field. For of all dried-fruit containers, the most widely known and, apparently, least in need of a design change sales-wise was the simple golden foil wrap identifying Sunsweet, the world's largest-selling brand of prunes and a leading source of dried peaches and apricots.

Millions have been invested by the California Prune & Apricot Growers Assn.—whose 5,000 member growers are the real owners of the brand—in promoting public acceptance and recognition of Sunsweet's former packages. The old wraps were the mainstay of annual sales in excess of \$20,000,000.

Yet Sunsweet two years ago quietly began the delicate and costly task of restyling its most important sales tool. Now the results of those efforts are

appearing on store shelves across the nation.

When first adopted in 1946, Sunsweet's former wraps were the culmination of the brand's pioneering in the use of gravure-printed aluminum-foil packaging for food. Both eye-catching and protective, these wraps have been called "classics of modern design." They were even named to *Packaging's Hall of Fame** as representing the most notable packaging in the dried-fruit field.

But important changes have occurred in both food packaging and merchandising since that time. Many of Sunsweet's competitors have switched their dried fruit from cartons into transparent bags. And self-service supermarkets have become the rule rather than the exception. Additionally, many new shoppers have ap-

* See "Sunsweet," *Packaging's Hall of Fame*, MODERN PACKAGING, July, 1953, p. 92.



SALES IMPACT of new design is dramatized by store display using giant replicas, some of which serve also as jumble bins for selling. Heavy advertising and point-of-sale programs back Sunsweet's new packages.



ARTFUL DESIGN leads viewer's eye from front panel around right side and to back panel, past the appetite-appeal "menu cards" to simple cooking instructions. Powerful new flaming-sun trademark capitalizes on a device long used in SunSweet advertising, but previously not so strong nor so prominently used on package; now it appears on all sides.

peared on the marketing horizon—shoppers not fully aware of the many different ways in which economical dried fruits can be appetizingly used.

Mindful of all these factors, E. N. Thayer, sales manager of the growers

association, decided the package design should be changed. The goal—greater impulse-purchase appeal—seemed worth the gamble always present in changing an already-successful package theme.

Having decided to make its gamble, SunSweet promptly took steps to lessen the risk involved. Several nationally known industrial designers were interviewed and eventually one design organization was chosen to study the problem and supply an answer. Then the sales department and the design firm began a joint effort that extended over a period of two years.

This group agreed that the old package was not a bad design. It had high legibility and, because of the way in which foil had been linked to SunSweet in the public's mind, it had a great deal of recognition power. They were determined that this memorable foil glitter should be preserved in any redesign.

On the debit side of this study, the group decided that the old SunSweet package was too conservative. It had no visual selling devices of any kind. And there were no dominant visual changes from one product type to another; it was their opinion that color



FORMER PACKAGE was selected for *Packaging's Hall of Fame* in July, 1953. The industry's top seller, it suffers only in comparison with the new design.

changes from one package to the next were not enough. They also cited the old wrap's failure to suggest uses for the product other than the traditional ones.

Getting a "handle"

A prime aim of the restyling project was to achieve a package whose design would induce the shopper to pick it up and turn it around, thus encountering other elements that would help clinch the sale. A continuing design, rather than just a "front panel" effect, was needed to build impulse-purchase appeal.

In order to keep this goal in mind, the designers prepared wooden blocks the same size as the SunSweet cartons and covered them with paper. All preliminary sketches were made "in the round" on these blocks to get a three-dimensional effect from the start.

Such "3-D" devices speeded initial selection of elements which could be used to carry the design from panel to panel on the finished package. Thus it was decided to feature the brand name and product type on banners which would wrap around the carton shell. Similarly, these sketches pointed up the advisability of carrying the front panel product vignette slightly around to the side panel, where still other pictorial elements could capture the eye and lead it further.

Quick visual identification of the product is a must in self-service merchandising if a brand is to catch the passing shopper's eye. For SunSweet's new cartons this is accomplished in two ways, in text on the metallic foil banner and, primarily, by means of remarkably faithful reproductions of full-color photos of the various fruit types.

Set-ups for these photographs were planned and lit in such a way that when reproduced on the printed wrap they would give shoppers the illusion of looking directly into the package. In the final designs this effect was enhanced even more by subtle shadowing and beveling of the "window frame." The lower edge of this frame

REALISM of window treatment and recipe suggestions, plus strength of the redesigned sunburst trademark, have multiplied sales impact manyfold. Silver background denotes the medium size of fruit; gold, the large.

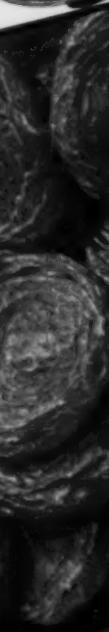
COURTESY REYNOLDS METALS CO.

SUNSWEET®

AT 'EM LIKE CANDY

Apricots are a wholesome natural con-
fection, and a treat just as they come from
nature. Kelly Kitchens suggest you sweeten

CALIFORNIA



SUNSWEET

APRICOTS *Tenderized*

TENDERIZED • THEY'RE PACKED BY THE GROWERS THEMSELVES • *

PREPARED WITH SULPHUR DIOXIDE
CALIFORNIA PRUNE & APRICOT GROWERS ASSN. • SAN JOSE, CALIF.

SUNSWEET

Cooked Fruit
You'll enjoy these apricots cooked in
the quick and easy way indicated
on the package. They're rich in
tree-ripened flavor.

Apricot Pie

For apricot pie at its richest and best make
it with the fruit in this package. These are
the finest apricots California produces.

SUNSWEET

Ham
Serve cooked apricots with
meat dishes. Their fruity flavor
provides pleasing balance to the
rich meat.



To Cook

Rinse apricots, cover with water allowing for evaporation
during cooking. Boil gently in uncovered saucpan about
30 minutes. If desired fruit may be sweetened to taste last
5 minutes of cooking.

FOR PIES • These apricots are not only delicious as a cooked fruit but are
unparalleled for fruit pies and other fruit recipes.

WRITE FOR FREE RECIPE BOOK

is used to carry the message: "Tenderized—they're packed by the growers themselves."

The "Tenderized" feature of the fruit, a Sunsweet exclusive, is repeated again with greater emphasis on the side panel continuation of the product banner. Here again, full-color reproduction, this time showing the product in use on a miniature recipe card, is utilized. Cleverly, only part of the recipe card is shown on the side panel. This naturally prompts the shopper to turn the package even further, thereby discovering still more vignettes and suggested uses for the product.

An interesting feature of this technique is that no actual recipes are given on these simulated recipe cards. Instead, the brief text stresses the flavor and quality of the fruit shown and its particular aptness for the use pictured.

These "recipe-less recipes," Sunsweet's advertising agency explains, actually are intended as serving suggestions that will stimulate sales. This feature was based upon the belief of the client and the designer that the average housewife already knows how to cook dried fruit, but does not fully realize its many appetizing uses other than the usual breakfast serving or fruit pie.

Suggestions pictured on the new wraps were based upon recipes that had scored the greatest consumer interest in previous Sunsweet advertisements and cooking pamphlets. To promote even wider use of the product, text on the back panel of the new wraps offers a recipe book free for the asking. Other back-panel copy explains size designations of the fruit, cross-sells other Sunsweet fruits and gives brief, easy-to-follow general cooking instructions.

Sun is stronger now

Some problems of the restyling project were readily resolved; others took longer. One of the more troublesome phases was the redesigning of the old Sunsweet sunburst symbol. It was the feeling of the designers that the old symbol did not capitalize fully on its potential memorability. Yet the sun, symbolizing traditional sun drying of fruits and such other implied associations as California and sunshine living, was vital to the brand name.

What was needed was a stronger version of the sunburst. For maximum recognition, this would have to be designed to appear in the same colors

throughout the carton line and also lend itself to adaption on the new shipping cases. Further, it would have to contrast harmoniously with each of the color variations being chosen to distinguish the different types of fruit. And finally it would have to be distinctive—unlike the sunburst symbols which are in use by other brands of food products.

Almost 100 variations of sunbursts

were executed before shelf tests and discussions determined the adoption of the one now appearing in the new designs. The new sunburst, in yellow and red, is used on the wraps wherever the name Sunsweet appears, to link brand and symbol definitely in the shopper's memory. It is on the front panel of each carton in the line instead of just a few, as before. And on this panel, the one most seen by



SHIPPING CASES reflect new carton design; color helps identify product variety. Note strong, clear identification of package, size and variety on all side panels, in line with latest food-distributor recommendations. New half-size case is offered for the first time.



EASY PRICE MARKING is provided with the change in case dimensions to one-layer pack and a shift of price spot to top of package.



MASS DISPLAY POWER and high visual interest are shown by this shelf arrangement of a variety of the new SunSweet packages. Gold-color foil is restricted to "large" and "extra large" fruit; medium size uses silver. "Extra large" has the added distinction of three rows of small white stars running vertically alongside the product "window."

shoppers, it appears three times larger than the old symbol.

Colors, as well as text and vignettes, lend shelf distinction in the new wraps to SunSweet's various types of fruit. Here hues were chosen which would not only be complementary to the vignette of the particular fruit, but also would lend greater individual identity. Prunes now bear a candy-red banner, apricots a bright green, peaches a blue banner and mixed fruits a white one. Further distinction is given to the mixed-fruit pack by carrying the words "mixed" in red and "fruit" in green, outlined in yellow.

Since studies by the design organization showed that shoppers look first for the type of product they want and then for the brand, an extra step was taken to secure even stronger product distinction. This move involved, for prunes as an example, carrying the brand name "SunSweet" more subtly on an opaque red banner, while putting the word "prunes" on a more eye-catching metallic red background. Similar variations of opaque and transparent inks are used for the other fruits. The catchword "California," re-

spected by storekeepers all over the nation for its selling power, also has been woven into the reading sequence of the front panel. Thus a shopper's eye travels along a word path which reads "SunSweet Large California Prunes," or whatever fruit type is shown.

On the new SunSweet wraps, as on the old, fruit sizes are indicated both by text and by different hues of the basic foil background of the package. Gold foil distinguishes the large-size fruit, while silver is used for the medium size. Gold also is used on wraps for extra-large prunes, with the added distinction of three rows of small white stars geometrically arranged beside the vignette window. Because aluminum foil's basic color is silver, only a minor change in text and the removal or addition of the gold lacquer cylinder on the gravure press is necessary to effect size changes for most of SunSweet's new wraps.

Cases echo the package

Stronger sunburst symbols also are stressed on SunSweet's new shipping cases. These bear adaptions of the new

wrap design and, for easier warehousing and prevention of shipping errors, are also keyed by color changes for various fruit types.

Physical proportions of the shipping cases for the 1-lb. cartons have been changed from the old cube to more of an oblong. This provides faster one-tier packing of the cartons and better palletizing. Also, it permits easier price marking in the store, since price spots now appear on the top of each foil carton, rather than on the side as before. Proportions of the case for the 2-lb. cartons remain the same.

Another change in shipping containers, officials of SunSweet believe, will be welcomed by smaller stores and by retailers who prefer to buy in limited quantities. This involves the introduction of a new "half-size" shipping case, which holds 12 cartons instead of the usual 24. Like the two-dozen pack, the half-size case opens at the top for quick price marking. Supplying this new size, association spokesmen say, eliminates any need for "breaking" of cases at wholesale points.

If any SunSweet officials still held *(This article continued on page 202)*

Protective foam

Polystyrene formulation finds a new use in cushioned packaging of fragile drugs

The rapidly growing acceptance of fabricated foam plastic as a functional packaging material is highlighted by its increasingly successful use for the protection of ethical drug products by such firms as Sharp & Dohme, Philadelphia.

A few years ago this company adopted for one or two items—more or less as an experiment—interior platforms of polystyrene foam in convenient side-opening folding cartons. Today it is packaging at least 20 different drug products in this manner and expects to package more in the same way.

Sharp & Dohme was attracted to this method as part of its company-wide packaging study to reduce mounting packaging costs.² Experi-

ence has shown, the company reports, that polystyrene-foam platforms provide an attractive and less expensive method of packaging a number of small vials in comparison with glued-in compartments, saving as much as 20% in cost per package. They also offer an efficient way to give maximum safety to sets of fragile ampoules at a lower cost than glued-in nests and other packing material, according to the company.

The cost per product unit for foam increases, says Earl Nack, Sharp & Dohme packaging specifications expert, if foam trays for single items are costed against set-up boxes.

The packages are planned and produced in this manner: The product to be packaged—the quantity of vials or ampoules, as the case may be—is usually sent to the supplier of the plat-

forms, who engineers the platform and specifies the size of carton required. In some cases, however, when a supply of a certain suitably sized carton is on hand, the platform may be designed to fit the carton.

The platforms are fabricated in two forms: one equipped with squared-off grooves into which the delicate glass containers are placed lengthwise; the other fabricated with recesses contoured to the exact shape of the vial or ampoule, thereby completely encasing it. Both are efficient, although the encased type offers slightly more protection and provides perhaps a more attractive package, sometimes at a cost no greater than that of the grooved type.

The vials or ampoules, of course, must be placed in the platforms by hand, but the operation is reportedly easier and less time-consuming. It is also quite possible to use semi-automatic methods for loading the filled platforms into cartons.

Practically no product breakage is experienced with this type of cushioning, according to Sharp & Dohme.

CREDITS: *Polystyrene foam platforms fabricated by Foam-Pak Co., 1341 Brandywine St., Philadelphia 23, Pa., using Dow Styrofoam.*

SUBSTANTIAL SAVINGS for multi-vial and ampoule packaging are represented by polystyrene foam platforms used by Sharp & Dohme, either of the grooved type or fabricated with contoured recesses in the shape of containers packaged. Carton size is usually specified to fit the platform.



Design



35 colors matched to red

In redesigning its packages for Rit tints and dyes, Rit Products Corp. had to consider, in addition to good design and visual impact, the problem of harmony of the basic two-color design with the 35 different pastel colors of the product—a color swatch of which had to appear on each individual carton. Question arose on whether the background color of red, with reverse white and black lettering, would flatten out next to a third color similar in chroma and hue. It was felt that this was a matter of personal taste rather than scientific determination. A number of so-called critical colors were painted on paper and pasted on acetate overlays, then shown to individual users and non-users of dyes. The results of the survey indicated varying degrees of preference, with no objections to any of the combinations.

The new cartons are merchandised in a compact metal display rack.

CREDITS: Cartons by The Nevins Co., Clifton, N. J. Display by Perma Wire Mfg. Co., New York.

Shipping unit and filing case for recording discs



A dual-purpose shipping container now in use by the Reeves Soundcraft Corp. for its MicroLac Recording Discs—circular records for high-frequency studio or home recording—not only protects the product in transit, but serves as a vertical storage chest. The container, made of corrugated, has a pull-out drawer which permits the discs to be lifted out easily without danger of scratching. In addition to the twenty-five 10-in. discs, there are also 25 envelopes for individual storage within the container. Titles may be marked on a numbered index on one edge. The tan containers are printed in blue.

The new disc packages conform to all construction requirements of uniform freight classification: bursting test, 125 lbs. per sq. in.; size limit, 40 in.; gross weight limit, 20 lbs. They are reported to withstand the rugged parcel-post and tumble tests.

CREDIT: Containers by Fibreboard Products, Inc., San Francisco.

Histories

Heinz adopts convenient new lug-vacuum cap

At last, a new cap reportedly offers the opening convenience and reclosable feature that housewives have been asking for for years. Among the first major food processors to use it is H. J. Heinz Co. on 7½-oz. jars for its pickle-product line. According to a recent consumer survey, the new cap already is proving to be very popular with homemakers. Quality-control authorities had to overcome major technical difficulties, according to Heinz, in making the lug-vacuum cap available for this line. With the introduction of this new-type closure, the company also changed to a new glass container—shoulder contour jars—for improved appearance and convenience in use. Wrap-around paper labels complete the package. Heinz's pickle line

so packaged includes gherkins, midget gherkins, sweet mixed and cross cut pickles, sweet relish, sweet onions, sweet cauliflower, sweet mustard, sour onions.

CREDITS: Lug cap by Crown Cork & Seal Co., Inc., Baltimore. Jars by Owens-Illinois Glass Co., Toledo; Hazel-Atlas Glass Co., Wheeling, W. Va.; Tygart Valley Glass Co., Washington, Pa., and Brockway Glass Co., Inc., Brockway, Pa. Labels by The Nevins Co., Clifton, N. J.



Now it's a phonograph record on cottage-cheese container

A sanitary foil cover onto which is mounted a phonograph record is the closure for this polystyrene cottage-cheese container, which is re-usable by the consumer as a cereal bowl. This unique container has been developed by the National Sales Council, a sales and merchandising organization specializing in promotions for the dairy industry, as part of a 12-week promotional plan for firms merchandising cottage cheese. There are 12 different "Kiddietoon" 78 RPM records, one for each week of the promotion, and each has two sides. They are playable on any standard record player. The tunes range from nursery rhymes to Christmas carols. A slip of paper inserted between the foil cover and the record offers the purchaser of the package a three-speed portable record player at a 60% discount.

CREDITS: Containers and records made by Precision Plastics Co., Philadelphia, using Monsanto Chemical Co.'s Styrene plastic.



How to get to the top

Swanson's has won leadership in the packaged-poultry field with just nine years of intensive package development



BELOW-EYE-LEVEL display is improved by new six-color lithographed lids on boned chicken and turkey cans, overcomes lack of appetite appeal when cans are on low shelves. Dishes pictured will be changed for different seasons and promotions.

In the nine short years since it began packaging its own brand of canned and frozen poultry products, C. A. Swanson & Sons, Omaha, Neb., has become the undisputed pace-setter in this field—and much of the credit goes to its dynamic packaging.

Newest stars of the Swanson line—which includes packaged frozen beef and poultry pies, chickens and chicken parts, along with canned whole chickens and boned chicken and turkey—are, of course, the phenomenally successful turkey and chicken TV Dinners, the first complete frozen meals to gain national distribution.

Judging from the way these have caught on in less than a year, they may soon be challenging Swanson's frozen pies for first place in the company sales records. And that would be no small achievement. Swanson's pie sales jumped from four million in their first year, 1951, to 25 million last year. They now amount to about 40% of the national total for this fastest-growing item in the frozen-food field.

Other Swanson achievements:

Its frozen chicken parts in uniform-weight cartons (1 lb. net), which put pricing of these products on a standard basis for the first time (1948).

Its Unipak system, the first successful method of packing poultry—cases of even pound weight (1950). The system has since been refined to a point where every bird in a case weighs exactly the same.

In packaging—as in production, sales merchandising and other phases of its business—Swanson has never been content to rest, even briefly, on its laurels. Constant improvement is a company watchword. Packages have been remodeled periodically in line with experience and new developments. The company has tried nearly every standard type of packaging ma-

terial at one time or another, and its specifications have resulted in the development of at least one altogether new material, the cellophane and tissue-parchment lamination now used as an outer wrap on the TV Dinners. Swanson requirements have brought new packaging machinery into being, too. Equipment designed especially for the company is used in all 17 of its plants.

Swanson executives believe that the current hot competition among brands of frozen foods has elevated the role

the growing frequency of impulse buying and brand switching. In view of this, it is not surprising that Swanson's top executives take an active part in every phase of the company's packaging program.

As soon as the product-research department has determined the amount of a product that will best serve the average family, merchandising and pricing know-how come into play. A balancing of all pertinent considerations results in a can or package size that can be retailed at a figure within

the so-called magic price zones. But in product size, as in other aspects of its business, Swanson has never hesitated to make changes, once convinced that they were likely to increase sales. There have been many size alterations and additions to the company's line since 1945, when M. Crawford Pollack, formerly sales promotion manager of Du Pont's Film Division, joined the company and took charge of its packaging.

Swanson hasn't always been so sophisticated, packagingwise, as it is today. Its first canned chicken-fricassee label (1945) was a pale yellow-and-blue design with little shelf appeal. The second, which had a neutral tan all-over fricassee pattern as a background for the copy, replaced the first after only a few months. It was better, but not much. In mid-1946, the company introduced a third label—with larger lettering and a design made up of cross-hatched blue, red, yellow, dark blue and white—that was really effective.

To prove its pulling power, Swanson called in all merchandise with the older designs from some 1,800 stores and replaced it with new cans. Even though it was a slow period, sales in some cases actually tripled. The average increase was 60%.

There was no vignette on the original Swanson label, but today the company rotates four-color vignettes, each accompanied by recipe copy.

Last year, to attract attention to a



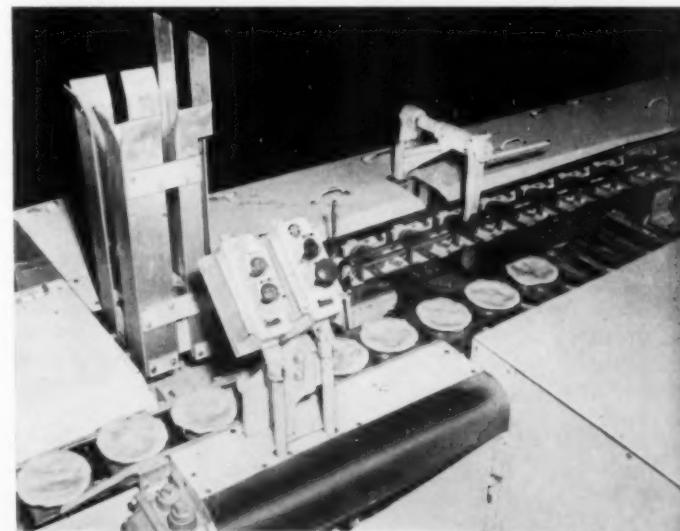
HIGH QUALITY is the point Swanson aims to put over by picturing the product on elegant silver trays in full-color design now used on latest fryer and parts labels. Lithographed cartons with clear cellophane over-wrap are in contrast to plain cartons with color-printed over-wraps which are commonly used in the frozen-food industry.



of packaging to its highest level yet in this field. They point out that, while packaging undoubtedly is more important than ever before in the food industry generally, a number of factors have combined in the frozen-food field to intensify this situation. For one thing, the record growth of frozen foods, particularly pre-cooked items, has brought on a pitched battle for the relatively small amount of freezer space in retail stores. The contention among non-frozen products for display space is heated enough, but while these products can be shown anywhere in a store, hundreds of frozen foods today are fighting over a few precious cubic feet of cold air.

Attractive, eye-catching packages are absolutely essential for success in this struggle, Swanson believes, and the need for them is heightened by

100 PIES A MINUTE—that's the speed of this cartoner, which feeds cartons, inserts pies, closes packages. In 1953 the company began cartoning a poultry product automatically for the first time. Sales of 25 million pies last year represented 40% of the national total.



Minimum inventory and maximum sales are shipping-unit objectives



FRACTIONAL packing of shipping cases permits small retailers to buy in small quantities. Master cases of 24 one-pound cartons of chicken thighs are packed in bags containing six cartons each. Retailers can buy them by the bag. TV Dinners may be bought in six-dinner quantities from jobbers who stock 24-package master shipping containers.

fall promotion on its two canned chicken-fricassee items, Swanson taped $\frac{1}{8}$ -in. single-color fluorescent bands around the middle of the regular labels. The bands were used in six different colors and carried a save-15-cents consumer offer. They were highly successful, according to the company.

Newest Swanson packaging development for its canned products is a lid bearing a six-color lithographed picture of a dish that features the product in the can. This grew out of the company's concern over the lack of appetite appeal and brand identification of cans when displayed below eye level.

A definite "first" in the field of canned meats, fish and poultry, the new lids are already in use on Swanson's boned chicken and turkey cans.

They are expected to stimulate impulse buying and the dishes pictured will be changed for different seasons and special promotions. The company plans to spread the idea to other items in its canned line as soon as possible.

Picture-lidded or not, Swanson's cans should get excellent display in the company's latest floor merchandiser, a cardboard bin featuring the Swanson hen, "Penny," enfolding a jumble display of cans. Lithographed in four colors, the merchandiser can accommodate the contents of several cases.

Swanson's frozen-product cartons—used for TV Dinners, chickens, chicken parts and the turkey, chicken and beef pies—are characterized by a strong family resemblance. Design-wise, though, they're subdivided into various different groups.

The pies, fryers and broilers, and parts are encased in lithographed cartons with a clear cellophane overwrap—in contrast to the plain cartons with color printed wax overwraps that prevail in the industry. Swanson is convinced that its method results in greater eye appeal, together with adequate protection.

The various chicken-parts cartons—for breasts, thighs, wings and drumsticks—are almost identical in appearance, except that each carries a verbal identification, a color illustration of the particular product and a color panel to aid in selection. Breasts, for example, are distinguished by a red panel, wings by a brown one.

The most recently developed carton design, featuring the product arranged on a distinctive silver tray, has heightened the similarity between the fryers and parts packages. Company representatives searched scores of jewelry and antique shops before they found a tray they felt had just the right "tone" for the carton pictures. Photographed in color and worked into the carton design, the tray finally chosen is intended to denote the high quality of Swanson products.

Poultry products, by their very nature, have resisted most efforts to mechanize their packaging and, at the start, Swanson's millions of frozen pies were all cartoned by hand. In early 1953, however, the company and one of its suppliers finally developed a machine that would feed the cartons, insert the pies and close the packages. Adoption of the new machinery meant switching from the original tuck-in carton to a new type with a self-locking end flap, but this minor adjustment was easily made and the company began cartoning a poultry product automatically for the first time in its history.

With the introduction of the new equipment, production soared—the Omaha plant alone now turns out more than 300,000 pies a day—and at the same time, production costs dropped 10 to 12%.

Inside the carton, the chickens, parts and pies are protected by additional packaging materials. The chickens and parts are wrapped in cellophane to guard them against dehydration, dust and dirt. The container used for the pies is the result of much experimentation. After considering such possibilities as a glass dish and a metal-rimmed paper container, Swanson decided on an alumi-

CANNED LINE spans a size range from 5 oz. (boned chicken and turkey and chicken spread) to a weight of 3 3/4 lbs. (whole chicken).



FLUORESCENT BAND, bearing "save-15-cents" consumer offer, was taped around regular chicken-fricassee label for 1953 fall promotion. The results pleased company.

num-foil pan. This has proved to be well suited to its threefold function: protecting the pie on its way to the consumer, containing it during oven heating in the home and serving as a dish from which the pie can be eaten. In the three years since Swanson introduced its chicken pies in the foil container, the pan's strength has been tripled while its thickness has been reduced by 30%.

Encouraged by the success of its "Pie Blast" promotion of a year ago, which resulted in the sale of more than a million cases of pies in a 90-day period, Swanson launched a "Pie Blast No. 2" last September. The latest promotion, which continued through November, has been spearheaded by the heaviest frozen-pie advertising program ever—Involving television, newspapers and billboards. Dealer, broker and distributor cooperation has been stimulated by special promotional allowances, quantity discounts and incentive awards. Results so far have surpassed expectations, according to the company.

The TV Dinner packages, while recognizable as members of the Swanson family, represent a solution to a different set of problems. Aluminum foil obviously was too light in weight to serve as a container material for this product and, after testing several other materials, the company settled

on a three-compartment tray stamped from 0.012-gauge aluminum sheet. When testing revealed a weak area in the tray caused by the division into compartments, this was quickly strengthened by corrugating the metal at that point. The tray, with the Swanson logotype stamped into it, has been used with marked success since the first dinners, made with turkey, went on the market in December of last year.

Each dinner is a complete meal for one person. The turkey dinner, for example, consists of sliced turkey, giblet gravy, dressing, whipped sweet potatoes and peas. The filled tray is covered with a sheet of pre-printed light-gauge aluminum foil, folded

NEW MATERIAL—six-color, reverse-printed MSAT cellophane laminated to tissue parchment—was developed specially as overwrap for TV Dinners. Stamped 0.012-gauge aluminum tray provides cooking and serving dish for the dinner. A pre-printed, light-gauge foil covering is crimped over the tray.



SUGGESTED SELLING ideas may be incorporated occasionally in the family design. Outdoor-grill illustration immediately identifies the package for broiling chicken split for barbecue.



down over the edges to give a crimp-fold closure. The foil not only prevents dehydration during storage and heating; it retains heat so well that the dinners are ready to serve after only 25 minutes in the oven.

In the beginning the frozen dinners were inserted in a 16-pt. solid

bleached sulfate carton with a reverse-tuck board, which required closing by hand. Now, however, a new-type carton, opening at the top instead of the side, permits automatic machine closing. The company's aim is full mechanization of the packaging processes.

A new kind of laminated material, developed to Swanson specifications by a supplier, is used for the mechanically applied overwrap. It consists of MSAT cellophane, reverse printed in six colors, laminated to tissue parchment with a special moisture-resistant laminant. The new wrap was designed to provide brilliant reproduction of food pictures, moisture resistance and extra protection against puncture or breakage resulting from rough handling. It has proved to be remarkably flexible and resistant to cracking when folded. Despite its apparent excellence, Swanson is now test marketing a foil outer wrap for the dinners.

The dinners' label design features an illustration of a "TV screen" showing a ready-to-serve dinner. The screen is silhouetted against a blond wood-grain background effect, simulating a TV cabinet that extends over the entire package. In addition to giving storage, heating and serving instructions, the label suggests re-use of the tray as a picnic plate or a tray for cosmetics, buttons, paper clips, relishes or water colors. A plug for Swanson frozen pies and chicken à la king rounds out the label copy.

The package has a labeled net weight of 12 oz. and measures 7½ by 9½ by 1 in. Compact and flat, it stacks and handles efficiently in retail freezer cabinets.

In 1950 Swanson began market testing frozen eviscerated turkeys in

a newly developed plastic-film bag, which permits a food shopper to see exactly what she's buying. The bag was so successful that it is now used for all turkey products (including the new stuffed turkey, currently being test marketed), ducks and whole fowl. The bird is inserted in the transparent bag by hand, a vacuum is drawn and the bag is closed. A 30-second immersion in hot water shrinks the film tightly around the bird, giving it a maximum of display. For easy and attractive brand identification, the bag bears the Swanson logotype and "Penny the Hen" emblem in a special red-and-blue design.

Swanson has used polyethylene bags chiefly for promotions. In one of these, a complete meal, made up of three separate frozen products in their regular retail cartons—Swanson frying chicken, French fries and peas—was placed in a polyethylene bag and sold to consumers at a unit price.

The most recent use of the bags was last summer in a promotion on canned products in certain market areas. For one example, four cans of boned chicken, held in place on a die-cut card by a printed polyethylene envelope, were offered at the regular price of three cans. The envelope was secured at the neck with a wire-and-vinyl tie, a new development that has proved superior to a rubber band for this purpose because it has no tendency to uncoil or deteriorate. In the Chicago area alone more than 150,000 of these units were sold during the two-week sale.

Swanson shipping cases are sized to provide the retailer with a minimum working inventory while main-

(This article continued on page 203)



SHRINK-TIGHT bags of modified saran latex give eye appeal to stuffed turkey, ducks and other whole fowl. Red-and-blue printed trademark identification, plus visibility, enable shopper to see exactly what she is buying.



POINT-OF-SALE material is essential to Swanson program. Newest floor merchandiser features "Penny the Hen" enfolding a jumble display of canned items. Lithographed in four colors, the bin accommodates several cases of canned goods.

NEWEST ITEM in Swanson line is frozen fruit pies. Each carton holds two 5-oz. apple or cherry pies packed in individual aluminum pie pans which are used for baking and serving the pies. Waxed overwrap with four-color vignette of the contents contributes maximum appetite appeal.



TINY BOTTLES of Sucaryl, a heat-stable, non-caloric sweetening agent, often carried in pocket or handbag, require labels that won't wear or tear off with constant usage.



IN NEW PROCESS, special decal (top center) transfers printed material to bottle. It consists of clear lacquer coating to which ceramic ink is applied in reverse printing, plus paper backing, stripped off after label has been applied to bottle. At left is unlabeled bottle. Bottle in center shows supporting lacquer film which causes label to adhere to pre-heated glass. Film is removed by firing, leaving label fused permanently into bottle surface (right).

Fired-on decals

Abbott's uses standard labeler to apply permanent color printing that is fused by heat right into the glass of Sucaryl bottles

New opportunities in the use of applied-color labels and decoration on glass containers are seen in the development of special-type decalcomanias which may be applied to bottles on regular automatic or semi-automatic labeling equipment, with the printing subsequently fused permanently to the container by means of the conventional firing operation in a continuous lehr or oven.

One of the first companies to make actual production use of this type decal is Abbott Laboratories, North Chicago, Ill., for labeling small sample bottles of Sucaryl, a new heat-stable, non-caloric sweetening agent.

There has been considerable interest in the machine application of ceramic decals and several of the

leading glass manufacturers are now equipped to use this method in pre-labeling glass containers for their customers. In contrast to the two colors economically practicable in regular applied-color labeling, the machine-applied decal is capable of providing a number of different colors, all in accurate registration. One manufacturer that has made extensive use of machine-applied ceramic decals is Associated Brands, Inc., producer of Kidmetics children's toiletries.* Unlike the colorful Kidmetics decals, however, which are protected by a lacquer coating but can be removed after soaking in hot water, the Abbott decals are fused permanently to the

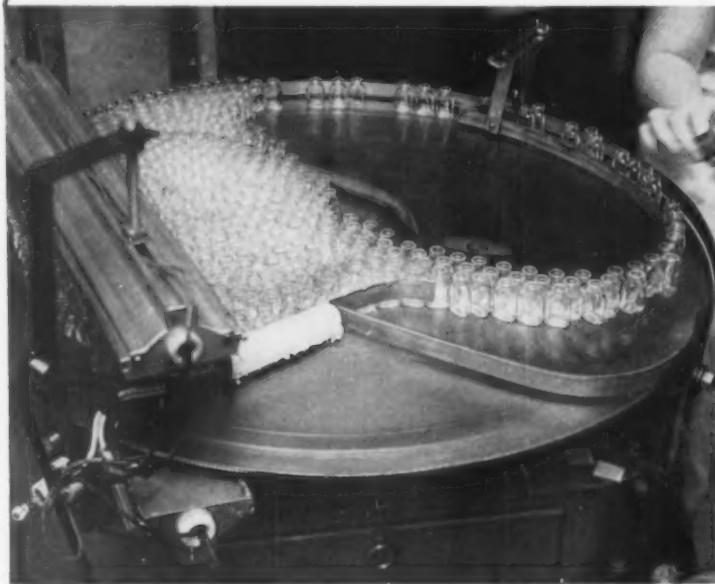
glass containers in the same manner as conventional applied-color labels.

Abbott's adoption of the special ceramic decals enables the company to replace a relatively slow, tedious screen-stencil printing operation with a much faster semi-automatic labeling operation, with resultant production economies and greater uniformity in the finished labels. Although at present the company is continuing to use both application methods until all details of the new decal process have been satisfactorily integrated, initial runs of the machine-applied labels have proved so satisfactory that the full production of sample Sucaryl bottles will probably be switched over soon to the new labeling process.

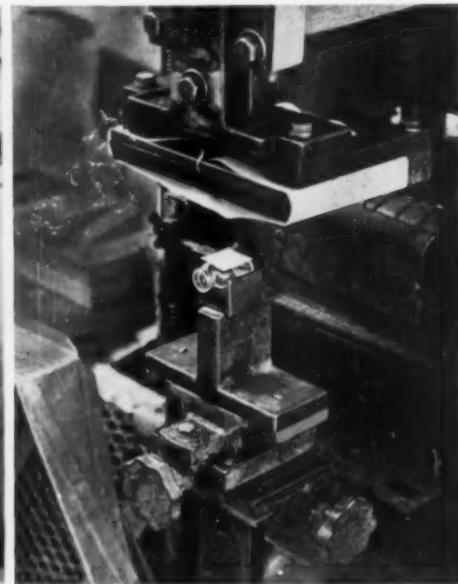
The special-mold glass containers

* See "Decals Automatically Applied," MODERN PACKAGING, Dec., 1952, p. 101.

Steps in the new decal-type



PRE-HEATING of containers to approximately 120 deg. F. is done by infra-red lamps (left) mounted above and below turntable as bottles are unscrambled and arranged in single file, ready for labeling.



CONVENTIONAL LABELER with vacuum pick-up positions label, which adheres when thermoplastic lacquer contacts warm glass.

used by Abbott for this sampling program are of oval cross section, stand 1½ in. high and hold 16 of the white Sucaryl tablets. The wide mouth of the bottle, which permits convenient dispensing of the tablets, is sealed by means of a plug-type polyethylene closure. The shape of the sample container closely follows that of the regular bottles, in which the Sucaryl tablets are sold in quantities of 100 and 1,000, and the 4- and 16-oz.

bottles used for Sucaryl in the alternate liquid form.

These handy sample containers of Sucaryl tablets are mailed out to physicians, home economists, dietitians, etc., in response to inquiries from advertisements published in professional journals. Customarily, several of the bottles are placed in a special mailing package along with a number of copies of a free recipe booklet, "Calorie Saving Recipes," which

shows how to use the new non-caloric sweetener in cooking, baking, canning and freezing. The basic material, sodium cyclamate, is the same as that now widely used in bulk by numerous manufacturers of canned or packaged foods and drinks designed for dietetic purposes.

The small size of the sample bottles permits them to be conveniently carried in pocket or handbag. The glass container, used in conjunction with the tight-sealing polyethylene closure, effectively guards the Sucaryl tablets against harmful moisture. As an added convenience to the user, the tablets, each of which is equivalent in sweetening power to a teaspoon of sugar, are scored across the center so that they may be divided in half if desired.

Originally, Abbott used regular printed labels for these bottles, applying them on a standard type of semi-automatic labeling machine. However, the paper labels proved unsatisfactory because they often became torn or separated from the bottle during constant carrying and usage. To overcome this difficulty, the paper labels were abandoned in favor of screen-stencil labeling in one color—black. The wording of the label—"Sucaryl Sodium Non-Caloric Sweetener" followed by the Abbott logotype—stood out clearly against the white tablets and did an



OLD METHOD was slow and tedious. Each bottle had to be placed in hinged frame so printed impression could be applied by squeezing ceramic ink through stencil by means of squeegee. Two girls could label a maximum of 4,000 bottles daily in contrast to the 2,400 an hour labeled by new method.



labeling method



BACKING IS STRIPPED off and labeled containers are placed in metal trays with plenty of space between to prevent smudging.



ENTERING LEHR, where temperature reaches 1,150 deg. F., bottles are placed label side up on metal mesh conveyor. Firing requires about an hour. The lehr operation fuses label permanently to glass surface.

effective job of identification. In addition, adoption of a fired-on label completely eliminated the problems associated with the previous paper variety. However, a production bottleneck arose due to the difficulty of making the original printed impression on the miniature bottles.

This stage of the process was handled by means of conventional screen-stencil printing, which involves superimposing a specially treated silk screen over each bottle and forcing the "glass" paint through the open areas of the screen by passing a wedge-shaped rubber squeegee back and forth over the layer of ink. Since the Sucaryl sample bottles are oval in cross section, they cannot be rolled over a stencil as may be done with a round container, but must be placed in the stencil frame individually and lifted out after the printing has been applied. The small size of the bottles also necessitates extreme care in handling to keep from smearing the letters when removing the containers from the stencil frame.

For the screen-stencil printing process, Abbott employees worked in pairs. One girl applied the labels and the other inspected each bottle to make certain that each letter had transferred clearly to the bottle and that the printing was not smeared or blurred.

Bottles were placed upright on metal trays holding approximately 8 doz. containers. As soon as a tray was filled, the bottles were transferred to a metal mesh conveyor and transported through the 50-ft. lehr for the firing and annealing operation. With the hand method, each team of operators was able to turn out between 3,500 and 4,000 labeled bottles daily.

A faster, more highly mechanized method of getting the printing onto the bottles, ready for the firing operation was needed. Abbott found the solution in a specialized type of ceramic decal which could be applied to the bottles almost as simply and rapidly as conventional paper labels. The decals themselves, measuring approximately 1 in. square, consist of a paper backing on which a thin layer of lacquer is deposited and carries the actual lettering in black. The "glass" paint comprising the actual label is a vitrifiable pigmented mixture containing organic materials which act as a temporary vehicle and later burn off in the lehr, along with the temporary lacquer film which gives body to the label and makes it possible to transfer the letters to the glass surface.

The pre-cut decal-type labels are applied to the bottles at a rate of approximately 40 units per minute by means of a standard-type, semi-

automatic labeling machine from which the glue rollers have been removed. To make the labels adhere to the bottles without moistening or the use of an adhesive, the bottles must first be heated slightly. Contact with the warm glass softens the thermoplastic lacquer film and causes the decal to cling tightly to the bottle.

Pre-heating is accomplished by placing the bottles on a metal turntable which unscrambles the containers and lines them up so that the labeling-machine operator can pick them up individually and place them in position for labeling. Two infrared lamps—one beneath the turntable and the other mounted just above the table—pre-heat the bottles to a temperature of approximately 120 deg. F. One lamp stays on continuously; the other, controlled by a thermostat, cuts in as required to maintain the necessary amount of heat.

The labeling-machine operator places each bottle on its side in the machine. The decal-type labels, fed from a stack or magazine on the back of the labeler, are picked up individually by a reciprocating vacuum head and deposited on the warm bottles. The decals adhere instantly as they contact the glass surface in face-down position.

(This article continued on page 188)



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1 A switch from vertical to horizontal transparent printed cellophane packages by the Michigan Bean Co. for its Jack Rabbit brand dry peas and beans enables side stacking on retailer shelves. Side stacking eliminates the vertical-package problem of toppling and keeps shelves neat and orderly despite extensive customer handling. Packages, Shellmar-Betner Div., Continental Can Co., New York.

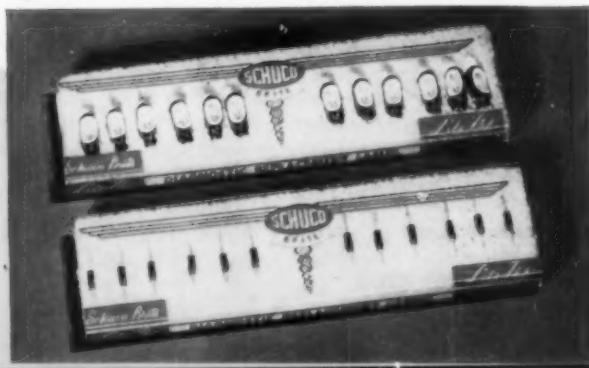
2 Two new folding cartons adopted by Fromm & Sickel, Inc., sole distributors of The Christian Brothers wines, are four-color printed, with a fine screen on deluxe white patent-coated board. The ruby port carton carries reproductions of four actual photographs of The Christian Brothers Winery. The brandy carton reproduces, on one panel, the bottle inside the carton and, on another panel, a suggested use in coffee. Cartons, Fibreboard Products, Inc., San Francisco.

3 For expansion into new markets, such as gas stations, newsstands, etc., as well as food-store outlets, Hollywood Hose, Inc., puts 60 convenient-sized, window-cartoned packages of nylons in a disposable help-yourself display carton. Tiered construction conserves counter space. Rose and black printing provides pleasing color appeal. Cartons, Blum Folding Paper Box Co., Inc., Brooklyn.

4 Breck Creme Rinse, a new hair preparation by John H. Breck, Inc., is packaged in the traditional Breck gold-colored carton imprinted with black and red lettering. Both carton and bottle label are decorated with an apple-blossom design. Bottles, Owens-Illinois Glass Co., Toledo, Ohio. Label, National Label Co., Philadelphia. Cartons, Warner Bros. Box Co., Bridgeport, Conn. Carton liners, Excelsior Paper Co., Union City, N. J.

5 Sales of the Walter Freund Bakery's Olde Tyme Brown n' Serve rolls are reported to have increased 400% with the introduction of these new rotogravure, full-color,

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tone-printed cellophane wraps designed with appetite-appeal illustrations of hot rolls being served with butter and jelly. Previously, the rolls were packaged in unprinted cellophane. Wraps, Milprint, Inc., Milwaukee.

6 New protective package for diagnostic replacement lamps made by Schueco-Brite, a division of Schueler & Co., consists of a fabricated block of polystyrene foam measuring 5½ by 1½ in., fitted with a backing board and a printed transparent plastic sleeve. The unit, on which a patent is pending, is scored for easy subdividing, thereby providing a package for even the smallest order. Styrofoam expanded polystyrene, Dow Chemical Co., Midland, Mich.

7 This convenient-to-use carton for packaging carburetor repair kits manufactured by Rochester Products, Div. of General Motors Co., is one of the new containers in a complete package-redesign program for the company's line of carburetors, car lighters and smaller spare parts. With this new carton, the possibility of loss of the tiny parts it contains is minimized. In use, the carton is placed on its back, the perforated front flap is torn back and each small part is removed as needed.

8 Valentine Day gift sales of Van Heusen "Century" shirts are promoted by this colorfully printed polyethylene bag that portrays a switch on the knight-slays-dragon theme. In the pink and white heart design, a girl is shown leaning on a sword over the knight and the dragon she has slain. The figures appear in black. Bag, Equitable Paper Bag Co., Inc., Long Island City, N. Y.

9 River Brand Rice Mills' new par-cooked rice, Aunt Caroline Rice, is marketed in a gold, red, black and white carton featuring a young and smiling Aunt Caroline trade character. Attention is focused on the product by a windowed picture of a dish of rice. Carton, Consolidated Paper Co., Monroe, Mich.

10 The complete line of Concordia religious pictures and puzzles is dramatically packaged in large, eye-catching, multicolor-printed cellophane bags and wraps that immediately identify each item. The line consists of five shadow-box pictures, five small puzzles and eight large puzzles. Bags and wraps, Arvey Corp., Chicago.

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PACKAGING PAGEANT



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LABELS THAT CAN

New high-gloss stock survives supermarket rough and tumble; brings new brilliance to Swift's color vignettes

The life of a can or bottle label in a modern supermarket is not an easy one. Particularly under self-selection merchandising, the packages receive an extensive amount of handling and knocking around which tends to soil or scuff the labels. Once selected by the purchaser, they are unceremoniously dumped in the bottom of a shopping cart, where they may be buried beneath various other products. Tossed onto the checkout counter, they are transferred to a bag or box, undergoing further rough treatment before being carried home and placed in the pantry or on the food shelf.

All this means that a can or bottle label must be exceptionally durable, as well as visually appealing and informative, if it is to compete successfully. How these elements can be combined effectively in a bottle label is illustrated by the new labels recently adopted by Swift & Co. for its Jewel Oil, used in fine cooking and in the

preparation of salads. The new high-gloss labels, utilizing a new type of paper stock having exceptional brilliance and requiring no lacquer coating, are made in two sizes for use on the pint and quart bottles in which this product is sold.

Printed in brilliant colors and incorporating three realistic food vignettes having strong appetite appeal, the new labels mark an important advance from the previous packages, whose only identification was limited to applied-color labeling in one color on the glass. Also printed on similar high-gloss stock is the company's new label for Swift'ning, the company's popular shortening made from meat fats and vegetable fats. The Swift'ning label also emphasizes appetite appeal, with mouth-watering illustrations of pies, cakes, doughnuts, shortcake and other favorite pastries.

Swift's new labels are part of a continuing program by this large food

supplier to upgrade labeling adopted during and after the World War II period. Previously, on clear-glass containers for Jewel Oil, Swift used a white applied-color label which did not give effective contrast against the yellow product. A change was made to an amber bottle in the interest of color contrast. The same amber bottle forms a strongly contrasting background for the new glossy white paper label.

In working out the design of the label, under the direction of Jim Zdenek of Swift's advertising art department, it was decided to make use of the strong red which has long been identified with various products made by this division of the company. The use of a strong, solid, red background panel incorporating the familiar Swift trademark and the words "Jewel Oil" in reverse white letters provided greatly increased company and product identification. Beneath this panel, in green script, is the phrase, "For Salads & Fine Cooking," which further increases the sales appeal of the product by briefly summarizing its role in food preparation.

One of the most effective features of the new Jewel Oil labels is their use of the three full-color vignettes illustrating typical, tempting dishes in which the oil may be used. These life-like illustrations, made from color photographs, include a cake, a platter of fried chicken and a salad—the latter accompanied by a recipe for the preparation of Jewel French Dressing. Such details as the fine texture of the cake, the delicate pastel pink of the icing and the golden, crispy brown of the chicken are brought out dramatically through the high quality of gravure printing produced on the smooth, glossy stock.

An important factor in the selection of high-gloss stock for the new Swift labels was the feeling that its brilliant white surface suggests the purity,



TAKE IT



SALES APPEAL is improved by prominent display of product name against a strong red background and brilliance of full-color vignettes on the new high-gloss stock.

FORMER ACL LABEL lacked impact against yellow product and was not adaptable for reproduction of realistic full-color, appetite-appeal illustration demanded today.

quality and cleanliness so important in food packages. The fact that the hard, abrasion-resistant stock does not require application of a coating over the printing to avoid marring or smudging means that there is no possibility of a yellowish or dulling appearance which might be imparted by such a coating. This permits the large white areas of the label to stand out in their full brilliance for maximum display effect.

Another plus feature of the label (*This article continued on page 207*)

JEWEL FRENCH DRESSING
 1 cup Jewel Oil
 1/2 cup vinegar
 1/2 teaspoon paprika
 1/4 teaspoon salt
 1/4 teaspoon pepper
 1 tablespoon sugar
 Put oil ingredients in a bottle.
 Shake thoroughly.

For Salads & Fine Cooking
 A CHOICE COTTONSEED OIL
 MANUFACTURED BY SWIFT & COMPANY - GENERAL OFFICE, CHICAGO, ILL.

©1955 SWIFT & COMPANY

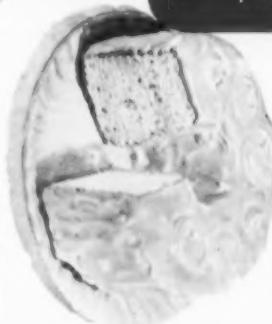
Salads



Frying
 Use Jewel Oil for deep fat frying doughnuts, fritters, potatoes, and chicken. Jewel is fine for pan-frying, too.



1 PINT



Jewel Chiffon Cakes, Layer Cakes, Pastry, Cookies, Brownies, Biscuits, Muffins—these and other recipes are found in the recipe booklet, "Quick 'N Easy Recipes Using Swift's Jewel Oil." Yours for the asking. Write Martha Logan, Swift & Company, Chicago 9, Ill.

Baking

NO LACQUER coating is required on high-gloss stock, which is reported to be exceptionally durable, scuff and stain resistant, and is easily wiped clean. The brilliant whiteness suggests quality and purity in a food product.



"Eye appeal plays an important role in the sale of packaged foods"

says S. M. KENNEDY, President
Consolidated Foods Corp., Chicago, Illinois

"The significant trend toward self-service in grocery stores today is one of the more important factors contributing to greater sales volume and lower distribution costs.

"Under this modern method of food marketing, a product must attract consumer attention to itself at the retail level. This development places greater importance on proper packaging and better label design.

"Eye appeal plays an important role in the sale of packaged food products. Many food commodities lend themselves perfectly to a visual presentation through the exploitation of glass packaging. The glass container, therefore, is in complete harmony with the most modern requirements of effective food product merchandising."

And
**here's how
glass yields
double
benefits to
the retailer**

It delivers

WHAT
STOCK CLERKS DID
IN 5-MINUTE TESTS



GARY ELMER
Cans — 4 cases and 10 cans on display —
12 cans in 5th case not price-marked.

16.5%

Average super-market profit on these products

21.8%

Average super-market profit on these GLASS products

70.8%

Average in-store decision for all items purchased

74%

GLASS-packaged products in-store decision

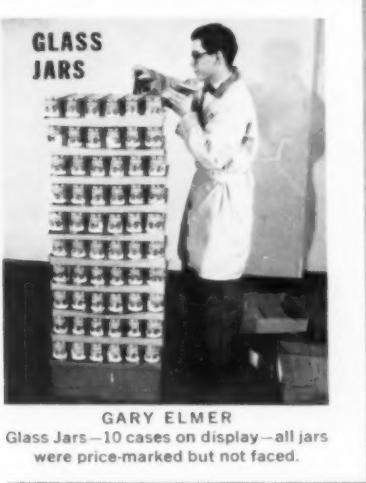
DuPont Study:

Here's proof glass helps you sell more, make more. The most recent of DuPont's retail studies shows in-store purchasing decisions are 70.8% with an average super-market profit of 16.5%. The study also shows glass is well above the average store decisions at 74% with an average profit of 21.8%.

greater sales, and at lower cost

You can regularly make more net profit from your displays if you feature cut cartons of products in glass. Glass yields more impulse sales, and costs less to set up.

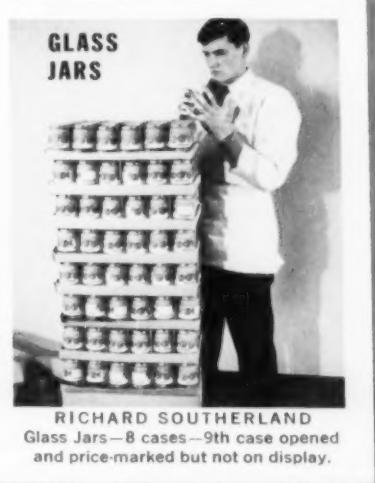
Your stock clerks can build cut-carton glass displays in one-third to one-half less time. Prove it to yourself. Try it in your store.



GARY ELMER
Glass Jars—10 cases on display—all jars were price-marked but not faced.



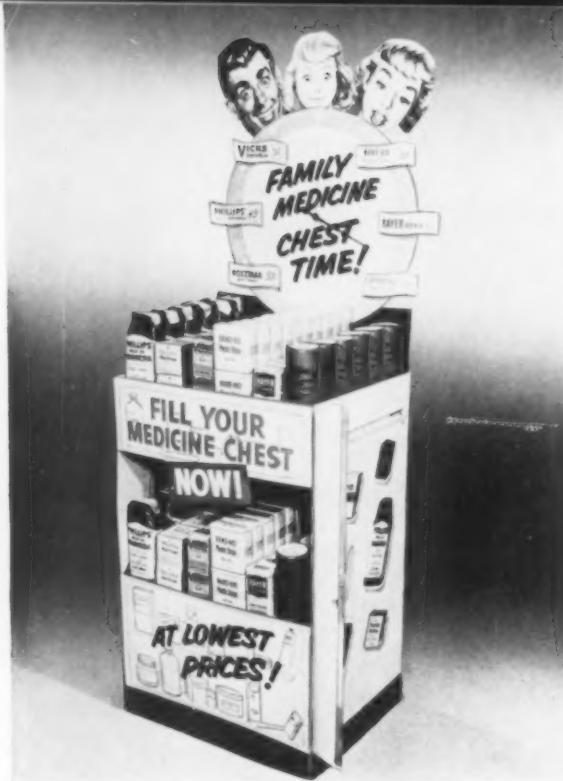
RICHARD SOUTHERLAND
Cans—4 cases and 17 cans on display—all cans in 5th case were price-marked.



RICHARD SOUTHERLAND
Glass Jars—8 cases—9th case opened and price-marked but not on display.

DURAGLAS CONTAINERS
AN  PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO



Drug co-op record breaker

Six nationally advertised products of six different drug firms are jointly merchandised in this "Family Medicine Chest Time" floor stand. The initial order was for 35,000 display stands, reportedly one of the biggest cooperative projects on record by makers of medicine-chest products. The promotion is aimed at demonstrating to retailers that they will sell more by giving preferential display position to these nationally advertised products. Companies participating are The Bayer Co. Div. of Sterling Drug, Inc., Johnson & Johnson, Lambert Pharmacal Co., Noxzema Chemical Co., The Chas. H. Phillips Co. Div. of Sterling Drug, Inc., and Vick Chemical Co. Products are Bayer Aspirin, Band-Aid Plastic Strips, Listerine Antiseptic, Noxzema Medicated Skin Cream, Phillips' Milk of Magnesia and Vick's VapoRub. The corrugated and paperboard display, lithographed in eight colors, is designed like a medicine chest and features a "Family Medicine Chest Time" clock. A red sweep hand, motor driven, points momentarily at each product.

CREDIT: *Display by Dorsey Display Corp., New York.*

DISPLAY



Timely interest for Lager

A full-color lithographed grandfather's clock surmounting a mahogany-finished corrugated paper cabinet serves as a floor merchandiser for G. Heileman Brewing Co.'s Old Style Lager beer. The display carries out the company's advertising theme—"Taste the Difference Time Makes . . . Aged Longer . . . Far Longer." Cases of beer are stacked within the unit. Floor space requirements are at the minimum, since the stand is only the width of a beer case, yet it displays 40 to 45 six-packs and stands 6 ft., 8 in. high. The unit, because of its small floor-space requirements, is suitable for use at various locations in supermarkets and package-liquor stores. The clock dial portion of the display can be removed from the corrugated cabinet base for use as a window or wall display. The Heileman Grenadier trademark is used for recognition and decorative effect on the dial of the clock. A die-cut hand in which dealers may mark their own prices points to the stacked packages below.

CREDIT: *Display by Einson-Freeman Co., Long Island City, N.Y.*

Utensils in a homey setting

Hawthorn Aluminum Cookware has introduced a unique merchandising and packaging program that includes a kitchen-range type of display stand and packages that convert into various buildings to form a toy "model village" for children after the utensils have been removed. The floor display is made of white corrugated board in the shape of a kitchen range. Containers for the individual utensils are of slotted corrugated carton construction. They are stacked in the open area under the display. By placing additional containers at the side of the unit, a mass-display effect is created. Unboxed cookware is displayed on the stove's imitation burners. End panels and back of the stove display provide space for sell copy. The re-use containers, printed in two colors on gray and pink-colored liner, combine to make a model village with a supermarket, a railroad station, merchandise mart, service station, church, home and signboard, fountain, park and construction scenes.

CREDIT: *Display and individual containers by Container Corp. of America, Chicago.*



GALLERY

Half-pints to try

Glenmore Distilleries Co.'s point-of-purchase display for half-pint bottles of its Glenmore brand is, in reality, the spearhead for a mass-sampling campaign. The metal display rack places these small-size containers before the customer and is aimed at creating an impulse-purchase market for the product. The company believes that this "Try It" campaign will prove to the public that its product has a distinctive, appealing taste. Sales of the half-pint bottles, the company feels, will lead to sales of the larger-sized containers. The display rack is constructed of heavy wrought iron and measures 17 in. in height. It holds 16 of the half-pint bottles—eight each in two rows—or the retailer may fill the unit with a combination of half pints and pints. Bottles are dispensed from the back of the display, making it easy for the clerk to remove them. At the same time, this feature makes it difficult for pilferers. The triangular metal back piece points up the "Try It" idea and provides space for retailer mark-in of price.

CREDIT: *Display by Associated Display Service, Chicago.*



Double winner



Designers' best

12 entries receive signal recognition among 3,000 in second annual Package Designers Council competition

Close to 3,000 entries were received in the second annual Package Designers Council competition, 2,000 more than were reported last year.

Winners were announced Feb. 9 at a reception and luncheon at the Hotel Plaza, New York City. The prizes included a top honor for the most outstanding package of the year and special awards for the best packages in 11 product categories.

A new division of this year's contest was PDC's International Award for the best foreign entry. In addition, 28 American package entries and two foreign ones were singled out for honorable mentions.

Selections were made Jan. 5 by a board of judges consisting of top-flight authorities in their respective fields of packaging, merchandising and marketing. Chairman of the judging board was Irwin D. Wolf, vice president of Kaufmann's department

store, Pittsburgh, and donor of the Irwin D. Wolf Award.

Serving with Mr. Wolf were: E. B. Weiss, merchandising consultant; Bernice FitzGibbon, president, Bernice FitzGibbon, Inc.; William Golden, creative director, advertising and sales promotion, CBS Television; Raymond A. Ballinger, director of advertising design, Philadelphia Museum School of Art.

Package designers also on the board of judges included Egmont Arens, Fellow in the Society of Industrial Designers; Robert Gruen, president of the Industrial Designers Institute; Jim Nash, past president of PDC and member of the Industrial Designers Institute, and Alan Berni, chairman of the PDC awards committee.

The award winners and selected entries will be presented in a special PDC exhibit at the American Institute of Graphic Arts, Feb. 5-20, and

at the American Management Assn.'s Packaging Exposition in Chicago, April 18-25.

The judges were high in their praise of the quality of this year's entries and the effectiveness of package design as an aid to modern merchandising.

The winning packages and honorable mentions with designer and supplier credits as announced by PDC in the respective product categories are as follows:

Most Outstanding Package of the Year—Irwin D. Wolf Award: Sylvania Bantam 8 Plastic Gift Pak for flashbulbs,¹ designed by Willard E. Lustenader of the Case-Hoyt Corp., Rochester, N. Y., for Sylvania Electric Products, Inc. Printing, die-cutting and assembling of the paper portions of this gift package was done by Case-Hoyt Corp.

1. Coordinated Packaging Program—Top Award: Ansul Chemical Co. fire extinguishers, designed by Raymond Loewy Associates, New York, for Ansul Chemical Co. **Suppliers:** Cartons, Green Bay Box Co., Green Bay, Wis., and Hammersmith & Kartmeyer, Milwaukee, Wis.

Honorable Mention: Paper products line, designed by Frank Gianninotto, New York, for Crown Zellerbach Corp.² **Suppliers:** Paper packages, Paper Products, Los Angeles. Cellophane packages, The Dobeckman Co., Cleveland, and Milprint, Inc., Milwaukee. **Honorable Mention:** Lone Star Beer, designed by Walter Landor & Associates, San Francisco, for Lone Star Brewing Co. **Honorable mention:** Get Up Lemon-Lime Drink line, designed by Smith & Scherr, Akron, Ohio, for Golden Age Beverage Co. **Suppliers:** Bottles, Owens-Illinois Glass Co., Toledo, Ohio. Cans, Continental Can Co., New York, and American Can Co., New York. Cartons, Gaylord Container Corp., St. Louis.

2. Foods—Top Award: Golden Age soft-drink line, designed by Smith & Scherr, Akron, Ohio, for Golden Age Beverage Co. **Suppliers:** Cans, American Can Co., New York. Cartons, Gaylord Container Corp., St. Louis, and F. J. Kress Box Co., Pittsburgh.

Honorable Mention: Colonial Sugar packages, designed by Egmont Arens, New York, for Cuban-American Mercantile Corp. **Suppliers:** Bags, Bemis Bro. Bag Co., St. Louis. Cartons, Con-

¹ See "Gift-Packed Flashbulbs," MODERN PACKAGING, Nov., 1954, p. 104.

² See MODERN PACKAGING, March, 1954, p. 146.

First honors in 10 categories



COORDINATED PACKAGING PROGRAM —Ansul Chemical Co. fire-extinguisher line, designed by Raymond Loewy Associates, New York.



NEW PACKAGE FOR NEW PRODUCT —Colgate-Palmolive Co.'s AD detergent carton, designed by William A. Troy of Colgate. Trade name has exceptionally high visibility.



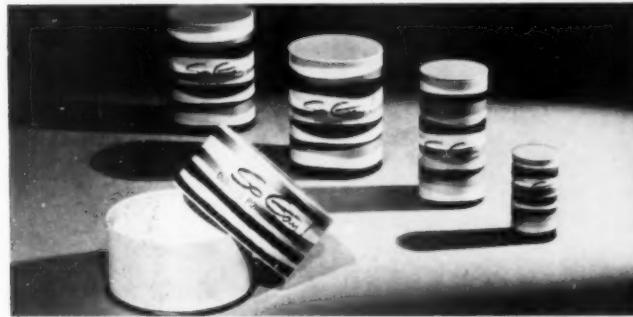
TEXTILES AND SOFT GOODS —McGregor Sportswear Piccolino line, designed by Mel Gusow Associates, New York.



FOODS —Golden Age canned soft-drink line designed by Smith & Scherr, Akron, Ohio.



TOYS —Tigrett Enterprises, "Giant House of Cards," designed by Charles Eames, Venice, Calif.



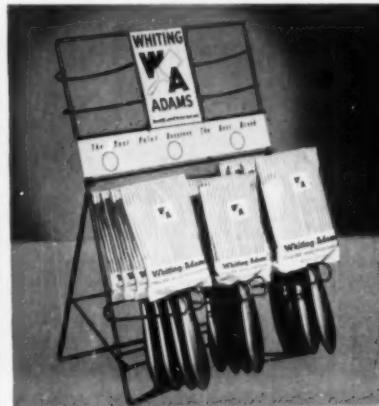
COSMETICS —Elmo Cosmetics "So Gay" line, designed by William Greenfield, Philadelphia. The line also won a special award in the 1954 exhibit of the Art Directors' Club of Philadelphia.



DRUGS —Johnson & Johnson Band-Aid line, designed by Nowland & Schladernundt, New York, in cooperation with the Johnson & Johnson staff.

REDESIGN PROJECT —Sears, Roebuck & Co., Cross Country Rose packages, designed by C. W. Harper of Sears, Roebuck. Construction designed by W. A. Ringler of carton-supplier staff.

HARDWARE —Whiting-Adams Co., Inc., paint-brush line, developed by L. E. Foulkrod, Whiting-Adams vice president in charge of sales, in cooperation with the supplier.



LIQUORS —Brown-Forman's Old Forester decanter, designed by Raymond Loewy Associates, New York. This easy-to-grasp container has a stopper of vacuum-plated polystyrene.

tainer Corp. of America, Chicago, and Lord Baltimore Press, Baltimore, Md. **Honorable Mention:** Bay State Macaroni Viva carton, designed by A. H. Godfrey, Container Corp. of America Laboratory, Chicago, for Bay State Macaroni Mfg. Co. **Supplier:** Cartons, Container Corp. of America, Chicago. **Honorable Mention:** Arrowhead and Puritas Water bottles, designed by Walter Landor & Associates, San Francisco, for Arrowhead & Puritas Waters, Inc.³ **Suppliers:** Bottles, Owens-Illinois Glass Co., Toledo, Ohio. Labels, Independent Lithograph Co., San Francisco. **Honorable Mention:** Nabisco Wheat Triangle Thins carton, designed by Raymond Loewy Associates, New York, for National Biscuit Co. **Supplier:** Cartons, National Biscuit Co. printing plant, Beacon, N. Y.

3. Drugs—Top Award: Band-Aid line, designed by Nowland & Schladermundt, New York, in cooperation with

³ See MODERN PACKAGING, Dec., 1954, p. 108.

Johnson & Johnson.⁴ **Suppliers:** Metal containers, American Can Co., New York. Cartons, J. L. Clark Mfg. Co., Rockford, Ill.

Honorable Mention: First Aid Essentials line designed by Alan Berni & Associates, Inc., New York, for Acme Cotton Products Co., Inc. **Suppliers:** Cartons, Robertson Paper Box Co., Montville, Conn. Cans, American Can Co., New York, and Continental Can Co., New York. **Honorable Mention:** Privine-Ciba Specialties cartons, designed by J. K. Fogelman of Ciba Pharmaceutical Products, Inc., **Suppliers:** Cartons, Walter P. Miller Co., Philadelphia; Wilkata Folding Box Co., Kearny, N. J., and Kiernan-Hughes Co., Jersey City, N. J. **Honorable Mention:** Mennen baby-products line, designed by Design Associates, Ltd., New York, for The Mennen Co. **Suppliers:** Cans, Continental Can Co., New York, and American Can Co., New York. Glass containers, Diamond

⁴ See MODERN PACKAGING, Nov., 1954, p. 139.

Glass Co., Royersford, Pa., and Armstrong Cork Co., Lancaster, Pa. Labels, The Nevins Co., Clifton, N. J. Cartons, Lord Baltimore Press, Baltimore, Md.

4. Cosmetics—Top Award: Elmo "So Gay" cosmetics line, designed by William Greenfield, Philadelphia, for Elmo, Inc. **Supplier:** Cartons, F. N. Burt Co., Buffalo, N. Y.

Honorable Mention: Helena Rubinstein's "Carriage Trade" Christmas line, designed by Eric de Kolb of Helena Rubinstein, Inc. **Suppliers:** Boxes, George H. Snyder, Inc., Philadelphia. Wraps, House of Harley, New York. Foam-bath boxes, J. Landowne Co., Brooklyn. **Honorable Mention:** Top-Note men's cosmetics, designed by Don Marvine of the Sears, Roebuck & Co. staff. **Suppliers:** Glass bottles, Berman Bros., Inc., Chicago. Aerosols, Crown Can Div., Crown Cork & Seal Co., Philadelphia.

5. Toys—Top Award: "Giant House of Cards," designed by Charles Eames, Venice, Calif., for Tigrett Enterprises, Jackson, Tenn. **Supplier:** Carton and playing cards, Morris Paper Mills, Morris, Ill.

Honorable Mention: Toy band-instrument line, designed by Alan Berni & Associates, Inc., New York, for Emence Industries. **Suppliers:** Cartons, Grand-City Container Corp., North Bergen, N. J.; Tru-Bilt Novelty Co., New York; Tower Container Corp., Bronx, N. Y.; Franklin Folding Box Co., Chicago, and Hygrade Folding Box Corp., Jamaica, N. Y. **Honorable Mention:** Small version of "House of Cards," designed by Charles Eames, Venice, Calif., for Tigrett Enterprises, Jackson, Tenn. **Supplier:** Cartons and playing cards, Morris Paper Mills, Morris, Ill.

6. Liquors—Top Award: Old Forester Bourbon decanter, designed by Raymond Loewy & Associates, New York, for Brown-Forman Distillers.⁵ **Suppliers:** Decanter and closure, Owens-Illinois Glass Co., Toledo, Ohio. Labels, Foilcraft Printing Corp., Brooklyn. Carton, Niagara Lithograph Co., Buffalo, N. Y.

Honorable Mention: Duquesne Pilsener Beer line designed by Lippincott & Margulies, Inc., New York, for Duquesne Brewing Co. **Suppliers:** Cartons, Robert Gair Co., Inc., New York; River Raisin Paper Co., Monroe, Mich.; Superior Paper Products Co. (This article continued on page 198)

⁵ See "Decanter Without Clutter," MODERN PACKAGING, Dec., 1954, p. 110.



BENTZ-PAPIER stationery line of Heinrich Arthur Hoesch, Germany.

Another Family of Prestige Products

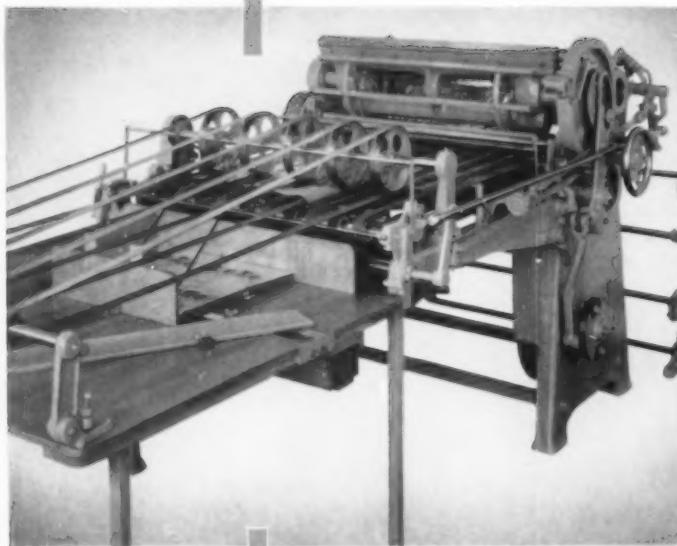
packaged by **BURT**



Old Spice Dusting Powder
And Body Sachet
made by Shulton, Inc.

F. N. Burt Company Inc. - Manufacturers of Small Set-up Boxes, Folding
Cartons and Transparent Containers - 500-540 Seneca Street, Buffalo 4,
New York - Offices in Principal Cities Or Write Direct - Canadian Division:
Dominion Paper Box Co. Ltd., 469-483 King St. W., Toronto, Canada

Pays for itself by cutting your costs



This is the story of one man who packaged his product in cellophane which he bought in ready-cut sheets. He decided to use a Beck Automatic Roll Sheet Cutter and cut his own sheets of cellophane from rolls. His *units* saving was small . . . but when multiplied by the number of sheets used per year, his *total* saving amounted to more than the cost of the machine!

This is not an isolated case, either. Other Beck machines are making similar records cutting all kinds of papers, acetates, synthetics, foils, films and processed fabrics. In fact, Beck machines cut practically anything that comes in rolls, and they not only cut it into accurate sheets, but they also pile and count the sheets.

DO YOU CUT or SLIT PAPER • CELLOPHANE • ACETATES
SYNTHETICS • FOILS • PROCESSED FABRICS
OR ANYTHING THAT COMES IN ROLLS?

WRITE:

CHARLES BECK MACHINE CORPORATION
406 N. 13th Street  Philadelphia 8, Pa.

Pacemakers since 1864 in the ENGINEERED APPLICATION of SHEET CUTTERS and SLITTERS

SALES SHOW it pays to package in film made of **BAKELITE** Polyethylene



Film printed by
Milprint, Inc.,
Milwaukee, Wisc.

"We caught a bigger share of a here-today, where-tomorrow market"

"Fast-changing fashion calls for merchandising maneuverability," says Paul Caplin, General Manager, Seamprufe, Inc., New York City.

"Take bouffant petticoats. All of a sudden bouffant was the rage. Everybody started making bouffant petticoats. They packed them in huge boxes to keep them flat. Handling and storage was a horrible problem for manufacturer, for retailer."

"Seamprufe hit the market with something new... our distinctive polyethylene bag... and with splendid results. The merchandise stayed crisp and fresh.

The package blended high-fashion design with simple copy and plenty of feminine appeal. It went over big with up-to-date retailers. Sure, today's problems are different; however, our first experience with the versatility and sales appeal of polyethylene certainly has generated ideas for future packaging."

Visibility. Protection. Cleanliness. Reusability. Convenience. Economy. These are sound reasons why you should favor fashion items packaged in film made of BAKELITE Brand Polyethylene. They sell better. They sell faster.



BAKELITE COMPANY, A Division of Union Carbide and Carbon Corporation **UCC** 30 East 42nd Street, New York 17, N.Y.



Plastic tubes have a tidy future

Now, along come these tubes molded from BAKELITE Polyethylene. Cousins to the famous "squeeze bottle," they adapt its advantages to their own purposes . . . a sure route to packaging success.

They're different from ordinary tubes in that they don't stay crushed. Foods, liquids, creams, or drugs can be neatly dispensed. Stop squeezing, and the excess is drawn back in. Tips won't clog. Since the tube is never folded or wrinkled, label and directions are always kept in plain sight. Solid-color or translucent, these

tubes molded from BAKELITE Polyethylene take printing with fine details in close registration. They're filled on the same type of machinery, slightly modified, used for metal tubes. Ends are closed by heat-sealing. Tube necks are molded with the body, preventing leakage. The light weight of BAKELITE Polyethylene keeps shipping costs down.

This is just another example of the imaginative packaging inspired by BAKELITE Polyethylene. Learn more about this plastic by writing Dept. AQ-30.

Bracon Tubes molded from BAKELITE Polyethylene by **Bradley Container Corp.**, Maynard, Massachusetts



BAKELITE COMPANY, A Division of Union Carbide and Carbon Corporation **UCC** 30 East 42nd Street, New York 17, N. Y.
The term BAKELITE and the Trefoil symbol are registered trademarks of U. C. C.

Cottage Cheese



plastic-protected
by

"Nestyle" by
Sealright
Company, Inc.,
Fulton, N. Y.

And the big reason is the protective BAKELITE Vinyl Resin coating on the interior and exterior of this improved "Nestyle" container. It's uniform, tough and flexible . . . no cracking, flaking, peeling or chipping as in conventional packages. No flavor contamination . . . no messy storage shelves . . . no extra clean-up time on packaging and automatic

dispensing equipment. This container can even be washed and reused for food storage!

A better dairy product container is just one of scores of outstanding packaging applications made possible by BAKELITE Resin coatings. Why not learn more about them in terms of your packaging? Write today to Department AW-30.

Vinyl, Polyethylene, Polystyrene, Phenolic and Epoxy Resins for Packaging

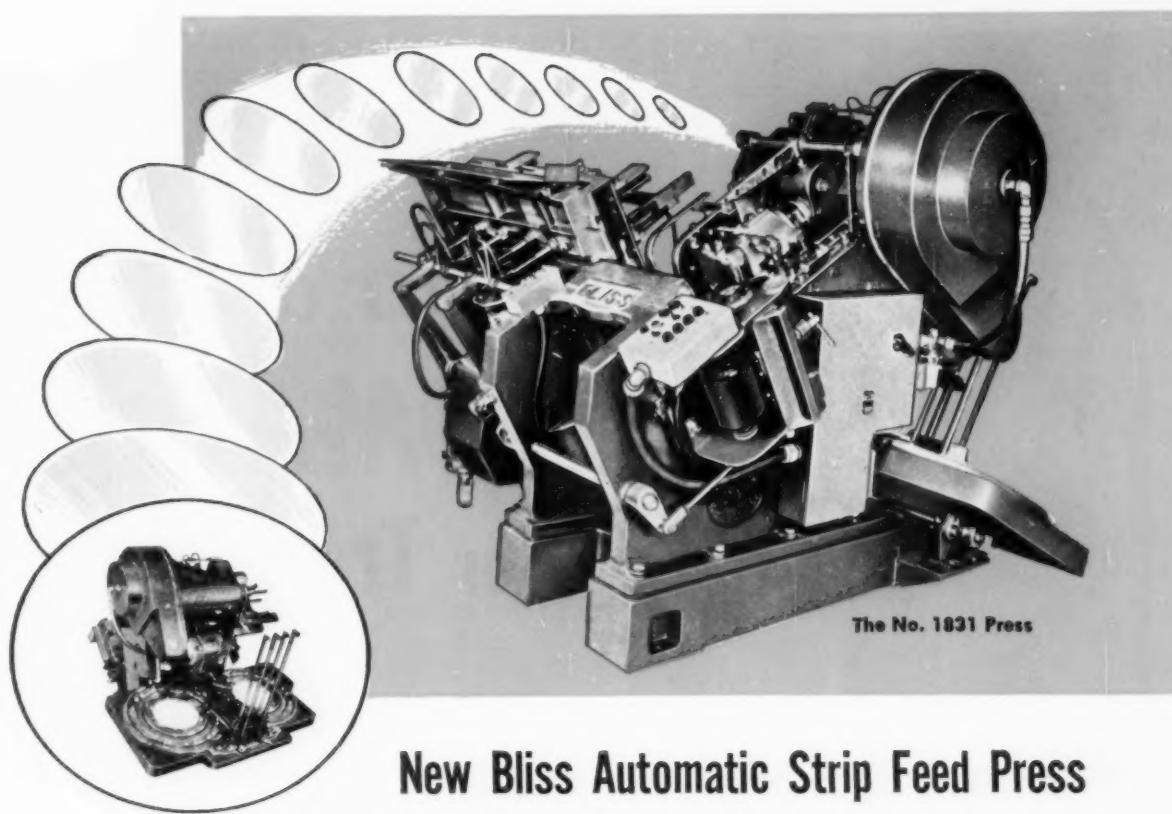
BAKELITE COMPANY, A Division of Union Carbide and Carbon Corporation UCC 30 East 42nd Street, New York 17, N. Y.

FEBRUARY 1955



Packages of Distinction
by Harcord





The No. 1831 Press

New Bliss Automatic Strip Feed Press will deliver more than 300 strokes per minute!

From the ground up, it's been engineered to slash maintenance needs and boost production speeds

You wanted speed in your strip feed presses—reliable speed! And here it is: to 300 strokes per minute (or more, depending upon can size), more than 18,000 strokes per hour all day long—without time-wasting stoppages for re-adjustment and repair.

One of the major features of the new Bliss press is its precision counter-balanced crank-shaft and feed bar crank which holds vibration to an almost irreducible minimum and thereby

permits smooth, quiet operation at high speed.

Other features: combination disc friction clutch and brake—permits instant starting • feed bar is driven by crank instead of lever—and has adjustable fingers • a bigger bolster plate • no idle strokes between strips, if desired • slide stops instantly at top of stroke.

You'll want to know more about these developments. For complete details, write, wire or phone

E. W. BLISS COMPANY
50 Church St., New York 7, N. Y.



BLISS
SINCE 1857

is more than a name...it's a guarantee

BLISS CAN AND CONTAINER MAKING MACHINERY



SLITTERS



BODYMAKERS



FLANGERS



SEAMERS



TESTERS



STRIP FEED PRESSES



Measures the product . . . makes, fills and seals the package

If your aim is AUTOMATION consider Transwrap

Automation in your packaging department can bring you great savings—and the TRANSWRAP is automation indeed!

You can feed your product to this machine either automatically or manually, depending on your production methods. From that point the Transwrap takes over completely.

Transwrap measures the sales unit of the product by volume or weight. Simultaneously it forms the package from roll material, fills and delivers it ready for packing.

The product can be solid, granular, powder, liquid or semi-liquid. The package can be formed from any heat-sealing material, including laminated foil. The machine will imprint automatically. You can use plain or printed material which is accurately registered as the package is formed. One operator can supervise three Transwraps in production.

GREATER PRODUCT PROTECTION

A Transwrap package is *hermetically sealed*, and can be gas filled in the packaging process. Your product, therefore, stays fresh—is enjoyed at the peak of perfection.

Illustrated folder sent on request.



NEW YORK PHILADELPHIA BOSTON CLEVELAND CHICAGO MINNEAPOLIS
ATLANTA DALLAS DENVER LOS ANGELES SAN FRANCISCO
SEATTLE TORONTO MEXICO, D.F.

TABLE I—EFFECT OF CATHODE RAYS ON WATER-VAPOR PERMEABILITY (WVP) OF PACKAGING MATERIALS
(Gravimetric method)

50% relative humidity until used in various tests.

Radiation. The radiation source was

TECHNICAL

ENGINEERING • METHODS • TESTING

Charles A. Southwick Jr. • *Technical Editor*

Effects of cathode-ray irradiation

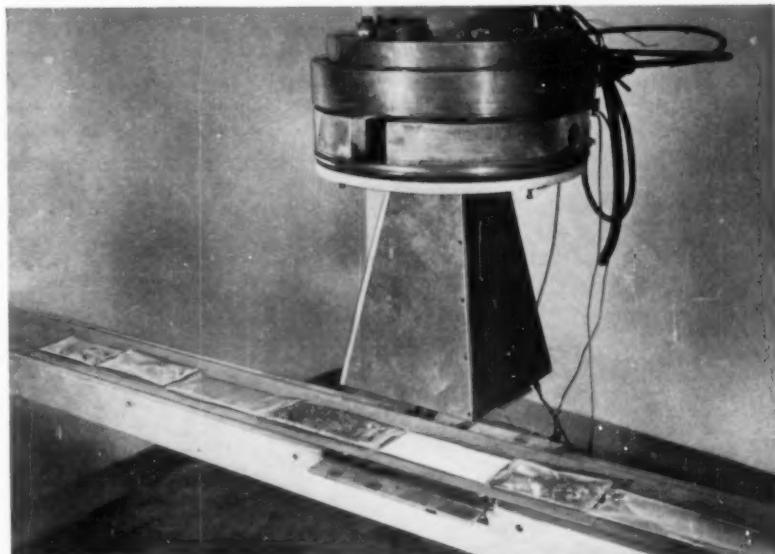
Experiments show new sterilization technique causes little change in functional properties of most flexible packaging materials.

By BERNARD E. PROCTOR and MARCUS KAREL*

Research in the past decade has indicated that sterilization of many types of materials (including foods, drugs and packaging materials) by ionizing radiations may soon become a reality (1, 2, 3).† One of the problems to be considered in the application of radiations to the sterilization of packaged foods and drugs is the possible effect of the radiations on the functional properties of the packaging materials. Little, if any, research has been conducted on this important phase to date.

Ionizing radiations have been shown to have appreciable effects on a number of chemical compounds (4). Many packaging materials are composed of simple organic compounds or polymers of the same and theoretically some effects of radiations on such materials might be expected. In view of these considerations, it appeared desirable to study the effects of ionizing radiations on materials commonly used for packaging of foods.

This paper reports the results of what is believed to be the first extensive investigation of the functional



1. TEST PACKAGES of film-wrapped products passing on a conveyor belt under the radiation head of a cathode-ray unit at M.I.T.

properties of food-packaging materials irradiated with sterilizing doses of cathode rays.

Experimental

This investigation was undertaken as part of a program on the utilization of ionizing radiations for insect eradication in packaged military rations, the details of which have already been reported elsewhere (5).

Samples. All samples were materials used extensively for the packaging of military rations and were supplied by the Quartermaster Food and Container Institute for the Armed Forces, Chicago.

After the materials were received in the Food Technology Laboratories at the Massachusetts Institute of Technology, they were stored in a constant-temperature room at 78 deg. F. and

* Contribution No. 212 from the Department of Food Technology, Massachusetts Institute of Technology, Cambridge, Mass. This paper reports research undertaken in cooperation with the Quartermaster Food and Container Institute for the Armed Forces and has been assigned No. 515 in the series of papers approved for publication. The views or conclusions contained in this report are those of the authors; they are not to be construed as necessarily reflecting the views or endorsement of the Department of Defense.

† Numbers in parentheses identify "References" appended.

TABLE I—EFFECT OF CATHODE RAYS ON WATER-VAPOR PERMEABILITY (WVP) OF PACKAGING MATERIALS
(Gravimetric method)

Packaging material	Dose	No. of determinations	WVP ^a	Standard deviation
Coated cellophane, 450 gauge	Control	24	0.56	0.15
	3.5×10^6 rep	24	0.53	0.12
N-2 Pliofilm, 140 gauge	Control	18	0.43	0.05
	3.5×10^6 rep	17	0.49	0.11
Bleached glassine	Control	24	26.9	2.12
	3.5×10^6 rep	24	27.0	2.34
Barrier material "H-3"	Control	12	0.71	0.18
0.002 in. polyethylene	Control	19	0.62	0.02
	3.0×10^6 rep	12	0.62	0.02
	4.0×10^6 rep	17	0.64	0.04
517 Saran, 100 gauge	Control	18	0.06	0.01
80-gauge Pliofilm laminated to 0.001-in. aluminum laminated to 0.001-in. acetate	Control	12	0.13	0.04
3.5×10^6 rep		12	0.14	0.05
0.001-in. polyethylene coated on kraft paper	Control	21	1.88	0.21
	3.5×10^6 rep	21	1.85	0.14
Waxed paper	Control	12	0.48	0.07
	3.5×10^6 rep	12	0.52	0.05

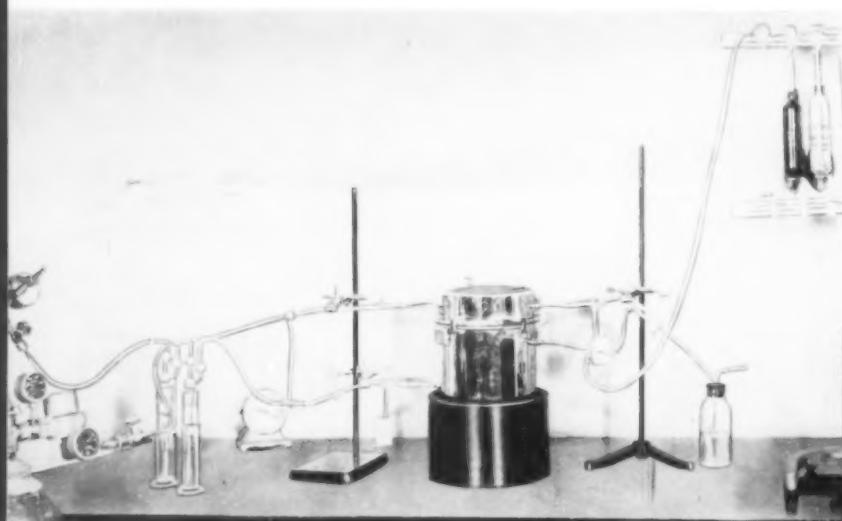
^a WVP in gm. per 100 sq. in. per 24 hrs. at 100 deg. F. and 90% relative humidity.

TABLE II—EFFECT OF CATHODE RAYS ON GREASEPROOFNESS OF PACKAGING MATERIALS

Material	Greaseproofness, seconds ^a	
	Control	Irradiated [†]
0.002-in. polyethylene extruded on 0.001-in. aluminum, laminated to 44 x 36 scrims	Over 1800	Over 1800
H-3 barrier material	Over 1800	Over 1800
0.002-in. polyethylene	Over 1800	Over 1800
Waxed paper (26-lb. sulfite, 9-lb. paraffin wax)	340	320
0.001-in. polyethylene coated on kraft paper	Over 1800	Over 1800
Saran 517 DW, 100 gauge	Over 1800	Over 1800
Bleached glassine	Over 1800	Over 1800
Plain cellophane	Over 1800	Over 1800
Coated cellophane	Over 1800	Over 1800

^a Average of triplicate runs.
[†] 3.5×10^6 rep.

2. APPARATUS used for measuring oxygen permeability of polyethylene film.



50% relative humidity until used in various tests.

Radiation. The radiation source was a Van de Graaff electrostatic generator producing a beam of accelerated electrons of uniform energy (6, 7). In all the experiments here described 2.5-million-volt electrons were used. The doses applied, calculated from the voltage and current meter readings of the generator, were considerably in excess of the relatively low doses which have been reported to be necessary for destruction of bacteria and insects.

Water-vapor permeability. Samples of films were tested for water-vapor permeability according to the standard TAPPI cup method (8). Desiccant used in the cups was eight-mesh anhydrous calcium chloride. The temperature of the testing cabinet was 100 deg. F. and the relative humidity, 90%. Each sample was tested at least in triplicate and a statistical evaluation was made of the results obtained.

Oxygen permeability. The permeability of polyethylene to oxygen was studied according to the method of Landrock and Proctor (9, 10). The film was mounted between the two chambers of a permeability cell and the initial content of oxygen in the lower chamber was adjusted to a low level (less than 2% of oxygen by volume) by sweeping the chamber with nitrogen. The lower chamber was then sealed off from the atmosphere and the upper chamber was swept continuously with oxygen. The oxygen content of

TABLE III—EFFECT OF CATHODE RAYS ON OXYGEN PERMEABILITY OF POLYETHYLENE, 0.0020 IN.

Test No.	Oxygen permeability ^a at irradiation dose of:	
	O (Control)	3.0×10^6 rep
1	306	355
2	267	295
3	358	330
4	375	368
5	282	329
6	341	302
7	309	430
8	328	323
9	206	364
10	324	298
11	341	328
12	322	367
13	360	—
Mean	317	340
St. dev.	43	37

^a Cubic centimeters per 24 hrs. per 100 sq. in. of material per one-atmosphere partial pressure difference.

the lower chamber was determined at the beginning and end of each test by means of an Orsat gas-analysis apparatus, which was connected with the permeability cell. The permeability of the sample was calculated from the increase in oxygen content of the lower chamber, the known volume of the lower chamber and the known area of the film specimen.

Greaseproofness. Several packaging materials were tested for greaseproofness according to the standard turpentine test (11, 12). For these tests, C. P. turpentine (anhydrous) was colored with oil-soluble Sudan III dye. Samples of the materials to be tested were placed on a sheet of absorbent paper resting on a flat surface and 5 gm. of "Ottawa" round-grained sand was poured onto the surface of each sample in a pile of uniform size. To the sand, 1.1 ml. of the colored turpentine was added and the time of the first penetration of the turpentine through

the sample test materials was noted.

Tensile strength. Tests of tensile strength were conducted according to standard procedures (13), with the use of a Suter Tensile Strength Tester having a range from 0 to 100 lbs. The samples were 5 in. long and 1 in. wide.

Heat-seal strength. Samples of heat-seal coated 0.0007-in. aluminum foil laminated to 40-lb. kraft and of polyethylene 18-lb. coated on 35-lb. kraft were tested for heat-seal strength with a Suter Tensile Strength Tester (13). The tests were made on strips of samples 0.6 in. wide, according to standard procedures. Both aluminum-kraft and polyethylene-kraft were heat sealed at 450 deg. F., 25 psi, 2 sec., with a Packaging Industries heat sealer.

Color changes. During the course of the experiments, it was observed that the color of the saran film (517 DW, 100 gauge) was changed considerably after irradiation. Consequently, sam-

ples of the material were exposed to doses of 2.5-million-electron-volt cathode rays ranging from 1- to 20-million rep and the color produced was determined spectrophotometrically. The measurements were made on single sheets of the film, with the use of a Beckman spectrophotometer, Model B. With samples irradiated at 2.5- and 20-million rep the transmittance of light was measured over the whole visible range of the spectrum (350 to 700 m μ). With samples irradiated at (This article continued on page 188)

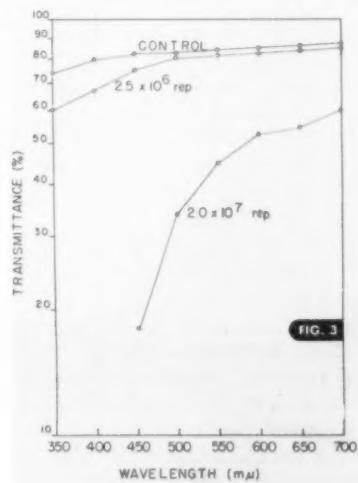
TABLE IV—EFFECT OF CATHODE RAYS ON TENSILE STRENGTH OF PACKAGING MATERIALS

Packaging material and dose	No. of determinations	Tensile Strength		
		Avg.	Stand. dev.	Coeff. var.
Coated cellophane (#1)		lbs.		%
Control	10	24.4	1.21	5
3.5×10^6 rep	10	16.0	1.05	6
Coated cellophane (#2)				
Control	10	24.8	1.08	4
3.5×10^6 rep	10	21.8	1.80	8
Bleached glassine				
Control	19	13.4	0.85	6
3.5×10^6 rep	19	14.5	1.12	8
0.0015-in. polyethylene on 0.00035-in. aluminum to 26-lb. sulfite paper				
Control	11	13.5	1.24	9
3.5×10^6 rep	12	12.9	0.92	7
0.001-in. polyethylene coated on 35-lb. kraft paper				
Control	11	71.5	3.50	5
3.5×10^6 rep	11	71.0	5.90	8

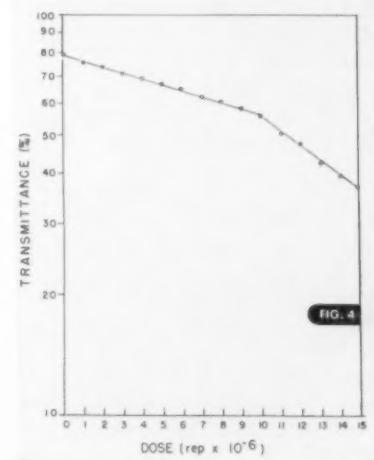
TABLE V—EFFECT OF CATHODE RAYS ON HEAT-SEAL STRENGTH OF PACKAGING MATERIALS*

Packaging material and dose	No. of determinations	Heat-seal strength		
		Avg.	Stand. dev.	Coeff. var.
Aluminum-kraft		lbs.		%
Control	60	2.7	0.16	6
2.0×10^6 rep	60	2.8	0.21	7
Polyethylene-kraft				
Control	36	3.0	0.24	8
2.0×10^6 rep	36	2.9	0.19	7

* Sealed at 450 deg. F., 25 psi, 2 sec.



TRANSMITTANCE of visible light, at 350 to 700 m μ , through single sheets of saran film irradiated with 2.5-million and 20-million rep of cathode rays.



TRANSMITTANCE of visible light, at 400 m μ , through single sheets of saran film that have been irradiated with different doses of cathode rays.

Cans for chemicals

Newer specialties require careful evaluation of container function and product compatibility. By E. R. BLAIR, G. E. CURTIS and L. E. KNEELAND*

The years since World War II have witnessed a number of changes in the field of chemical specialties. Many of the products which are currently available were not known before the war, while many others have been modified so radically in basic formulation that they bear little resemblance to their pre-war predecessors. Wartime restrictions and requirements were partly responsible for these changes, because they promoted widespread research for substitute materials as well as for improved materials to meet the exacting requirements of the military.

Concurrent with the development of these new or modified materials and products, a continuing program of research on containers and packaging methods has been in effect. One of the most dramatic illustrations of this was the development of the pressure container for aerosol or pressure-dispensed products.

The progressive ideas of the chemical-specialties manufacturers have developed a spirit of keen competition throughout the entire industry. One consequence of such competition is that manufacturing methods and specialized chemical mixtures become trade secrets or classified information which may not be divulged to anyone outside of the controlling company. This poses a problem to the packaging technologist who is responsible for the development of container specifications. If detailed information pertaining to the formulation of a new product is freely supplied, specifications can frequently be furnished on the basis of previous experience with similar products. Lacking this information, which is more often the rule than the exception, the technologist must resort to strictly empirical, or trial-and-error, test methods to determine a suitable container. These tests generally take the form of relatively long-term packaging tests using

all of the container variables available for the product in question. It is assumed in making these tests that the product formula is constant, since changes in the basic ingredient or in the types and concentrations of the impurities present may radically affect container performance.

Styles of containers available

One of the first considerations in packaging a product is to select the most suitable style of container. This is quite important in the case of non-foods because of the number of container styles available and the properties or advantages of each type. As this discussion is confined to metal cans, the number of available container styles can be reduced by excluding fibre and fibre-metal combination cans. Fig. 1 illustrates the more important types of metal-can styles employed for packing chemical specialty items.

The familiar grocery store processed-food can, consisting of a cylinder on which ends are double seamed, is occasionally used for chemical specialties. However, it is more usual for such products to be packed in containers having a reclosure feature. The two most common styles are the rectangular-base can with a nozzle and a cap reclosure, and the round can with a multiple friction-compression reclosure. The former style is variously referred to as a "varnish," "insecticide" or "I" style can, depending on capacity and dimensions. Fig. 2 shows the component parts of this style can. These include the bottom, body, top, nozzle or screw neck, cap liner and screw cap. Larger-size cans such as $\frac{1}{2}$ gal., 1 gal. and 2 gal. also are equipped with handles. The rectangular construction of this style can saves storage space and the square panels are advantageous for the display of names, trademarks and directions for use. Rectangular-base cans are also available with special spout closures to facilitate use of the

product. For example, household oil and lighter-fluid cans have spouts made of soft metal or plastic.

The nozzle-type reclosure may also be applied to a round can, which is commonly referred to as a "cone top" or "breast top" can. In addition to having a round base, this style can differs from the previously described rectangular-base cans in that the top end and nozzle are drawn from one piece of plate. There are some advantages in the ease of handling and filling round cone-top cans as against the display and storage advantages of the rectangular-base cans.

The second principal style of can is the round multiple friction-compression reclosure type, generally referred to as a "doubletight" style. This container is used for products of a paste consistency, such as wax, or for products such as paint, for which a wide opening is desirable. The various parts of this style can are shown in Fig. 3.

Closely related to the multiple friction-closure can, but less vaportight, is the single friction-compression reclosure can. These cans have a wide opening and may have either a round or rectangular base. They are used for dry products, such as powdered cleaners, or paste products with relatively nonvolatile components such as putty. Both the multiple and single friction reclosure cans are of a four-piece construction; that is, bottom, body, ring and cover or plug. A more economical three-piece can with a full open top and a plug-type or slip-cover reclosure is often used for paste-type products such as hand soap and grease.

In addition to the styles mentioned, there are numerous others, such as the tooth-powder-type can, aspirin boxes and shoe-polish can.

A special type can, rapidly assuming a larger market, is the can for pressure-propelled products, or aerosols. This container is unique in construction because of the necessity of maintaining the contents under high

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SCREW CAP

pressure. The pressure method of dispensing the product has resulted in the development of a wide variety of valves and end profiles.

Make-up of containers

The final evaluation of a particular container for a product lies in determining that the product reaches the ultimate consumer at the same high-quality level at which it was packaged by the manufacturer. In order that this may take place, each portion of the container must perform its job efficiently. Proper tests can help select the materials necessary. This is important because, if any part of the container is made of materials unsuitable for the particular formulation, noticeable product deterioration may result. When a container is evaluated for a product, the individual performance of each component part of that container must be considered. Thus, the information required to write the specifications for an adequate container may be assembled.

The principal materials entering into the manufacture of most cans include: the plate from which the cans are made; the inside enamel, if any, coated on that plate; the decorative lithography; the sealing compound used to make the double seams product proof; the cap liner used in the screw cap of "I" style cans and the solder or cement used in the fabrication of the body side seam. At times there are other considerations which are of minor interest.

The details of some laboratory observations made of each of these component materials used for the cans will be discussed briefly.

Testing procedures

If a progressive manufacturer in the polishes field, for example, is developing a new product, he may approach a can manufacturer for containers in which to package and market it. First consideration is given to the style and the sizes of containers desired. Then the material specifications for the can necessary to contain the product adequately are considered.

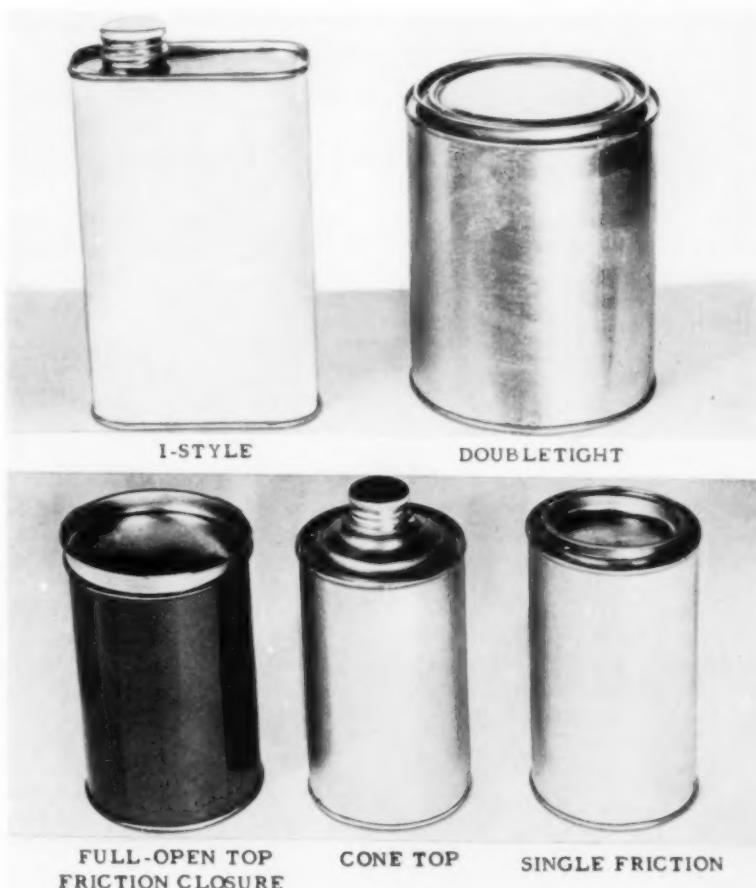
Sometimes such specifications can be made purely on the basis of past experience with similar products. At other times it is necessary to make laboratory tests with the product to determine container specifications. This is the more frequent occurrence when one is dealing with chemical-specialties products such as polishes.

If container evaluation can be initiated during the product development program, an adequate container is more likely to be available at the time the product is marketed.

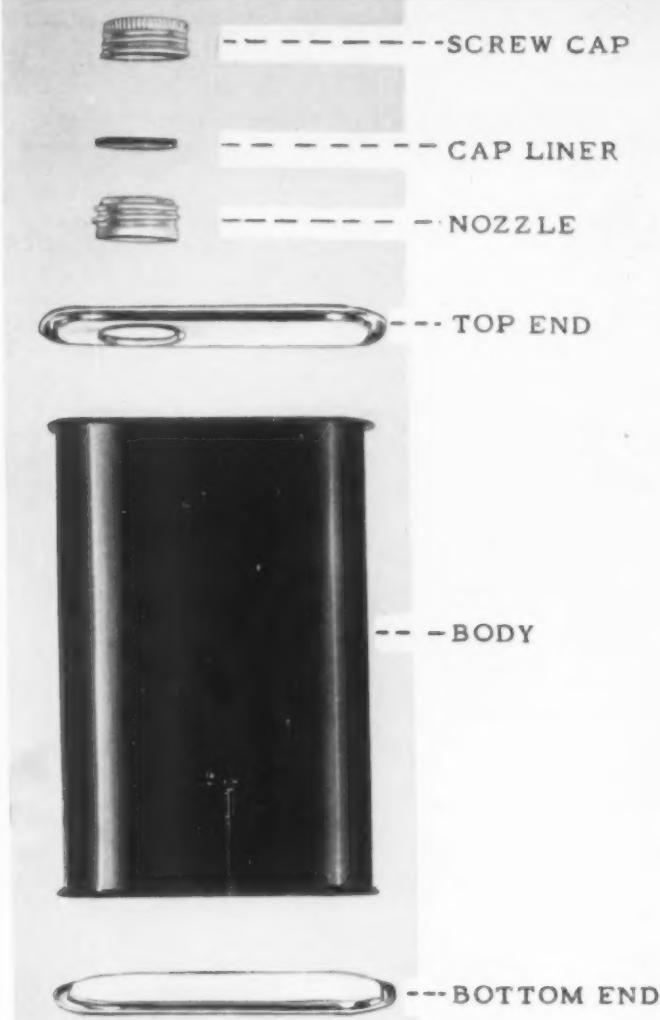
Tests may begin with the immersion of a large variety of strips of container manufacturing materials in sealed jars or test tubes of the product. After a few weeks or months of storage at 98 deg. F., the reaction of the product on these strips can form the basis for the trial of a smaller number of variables as complete containers. These may be filled with the polish under conditions simulating the commercial practice and then stored at 98 deg. F. to obtain accelerated storage-time effects. The samples may be examined every few months for evidence of any undesirable reaction between the product and container. It is often six months or a year before the lack of negative results constitutes a positive endorsement that a particular container construction is satisfactory for the polish under test.

The necessity for the length of this period is often questioned, but if assurance of proper commercial container performance is desired, the effects of prolonged storage must be evaluated. The possibility of accelerating these storage-time effects even more by use of 130 deg. F. or 160 deg. F. temperatures has been studied. Comparison of results obtained at these temperatures with the results obtained at 98 deg. F. has indicated that the data from tests made at the higher temperatures are not too reliable. Acceleration of some normal effects of storage time may be achieved, but these often are obscured and overshadowed by side reactions which do not occur at regular warehousing temperatures or at the mildly accelerating test temperature of 98 deg. F.

Following determination of container specifications by the tests outlined, it is advantageous to produce a semicommercial run of cans to be packed with product. This may involve 10,000 to 50,000 cans being



1. FIVE COMMON TYPES of metal containers used for chemical specialties.



2. COMPONENTS of an "I" style pint metal can, as commonly used for varnishes, insecticides, etc., shown in exploded view.

packed and put into retail sales channels. The results of such a test can be used to determine the customer reaction to the product and to the container label. It also serves as a test of container and product reactions to commercial handling. It is desirable for both the packer and the can manufacturer to retain samples of the pack for periodic examination to confirm the results noted in the original container test.

Successful completion of the semi-commercial run gives good confirmation that the product is satisfactory and the container is adequate. Then full-scale commercial production can be entered upon with minimum risks.

Product factors

The selection of a container to fit the product is the problem which most frequently confronts the container supplier, but after some years of this

activity, it becomes apparent that a large proportion of the available time is being devoted to a few types of products. A further analysis of this test work shows that many of the difficulties encountered are recurring and, as a result, in many of these cases the specific causative agent in the formula can be determined. It is hoped that a review of some of these experiences will help in pointing the way to a longer shelf life at maximum quality level.

Occasionally a suitable container cannot be found for a product except by means of some rather basic product formula alterations. Considerable embarrassment and delay can be avoided by recognizing this possibility and conducting preliminary container tests concurrent with product development or reformulation.

Probably the most significant general division of chemical-specialty

products that can be made from the container utility standpoint is between water-base and solvent-base types.

Water is not usually considered to be a corrosive chemical, but in the presence of air it greatly accelerates the corrosion of tinplate, as the rusting and steady disintegration of cans in the city dumps so vividly show. Fortunately, when the quantity of air or oxygen is limited and the water is held in various complexes, its activity is greatly decreased. These two mitigating conditions are largely responsible for the successful packaging of numerous emulsion products, such as polishes, cleaners and waxes. In order to take advantage of these conditions favorable to package stability, it is important to have a tight original seal and to caution the consumer to replace the seal tightly. It is equally important that the emulsion product be formulated to prevent deterioration and emulsion breakdown under prolonged storage at varying temperatures.

Again it is a fortunate coincidence that many of the salts that contribute most to instability in emulsions are also most prone to promote container corrosion. The concentration of soluble salts such as chlorides or sulfates in the water phase of emulsion products is certainly to be avoided, both from the emulsion-stability and container-corrosion standpoints. However, a few salts and certain organic compounds when added in small quantities are effective corrosion inhibitors.

The experiences with attempts to pack drinking water for our Armed Forces will illustrate some of the above points. Distilled water packaged without prior removal of air will develop heavy flocculent rust in plain metal cans within a few days. If the distilled water is de-aerated and vacuum packed, it will be subject to rust contamination, the amount of which depends on the effectiveness of the air removal. However, if certain natural waters or distilled water with small amounts of silicate inhibitor added are packaged with moderately effective air removal, the water will remain rust free for years. This dramatic effectiveness of inhibitors in distilled water cannot be expected to occur in all high-solids solutions or in emulsions where the water is held in various complexes.

Another important factor which influences container performance is the pH value. Most emulsion products

packaged in cans have pH values in the range of 6.0 to 9.0. Because tin is an amphoteric element, products outside this range will exhibit rapidly increasing attack on the tin coating. The most desirable pH range from the standpoint of container performance is 8.0 to 9.0.

Some of the things to be avoided in formulations are tannins, phenols and sulfides, all of which may cause discoloration. Volatile acids or alkalies will greatly increase corrosion in the free space or headspace of the can. Many alkaline volatile materials such as ammonia and amines are effective inhibitors in small concentrations, but they may become very troublesome if present in excessive quantities.

In contrast to water, pure organic solvents generally have little action on metals. For this reason, the packaging of a product like paste wax resolves itself into the selection of a container that may be easily reclosed but is relatively vaportight. However, commercial grades of solvents often are not pure. The devastating effect on metals of traces of water in carbon tetrachloride is probably well known. A rather commonly experienced impurity in benzene is thiophene which has caused discoloration of flammable-type paint and varnish removers when packed in cans. Sometimes a combination of solvents such as an alcohol and ester as found in lacquer solvents will produce very deleterious effects. The water in the alcohol hydrolyzes the ester to produce corrosive acids. These occurrences are rare because chemical-specialty formulators are generally alert to the necessity of keeping a close check on their suppliers' products.

There are many other things that may be done to insure that a new product will have a long, uneventful shelf life in the container. If the product is to be colored, stable dyes should be used. Tin salts are good reducing agents and if tin is in contact with acid or alkaline products, there will be tin salts present. Dye manufacturers can give much good advice regarding this problem. Secondly, if the basic material is difficult to emulsify and requires a large amount of emulsifying agent, it is an excellent idea to determine the stability of the emulsion in containers at elevated storage temperatures. This does not refer to product instability as such, but product instability because of reaction with

the container. Examples are the coagulation which was found in some early formulations of latex paint and the perennial problem of instability of emulsifiable concentrates of many of the chlorinated insecticides when packaged in cans.

This outline of some of the basic factors involved in formulating products to insure a good shelf life with maintained quality is certainly not complete. Most chemical-specialties products are conveniently and effectively protected by metal containers without making special product alterations to fit the container. However, there are potential troubles, many of which are not easy to anticipate. For this reason, it is highly advisable to know the container will be satisfactory by conducting tests concurrent with formula developments or formula changes.

Choosing container materials

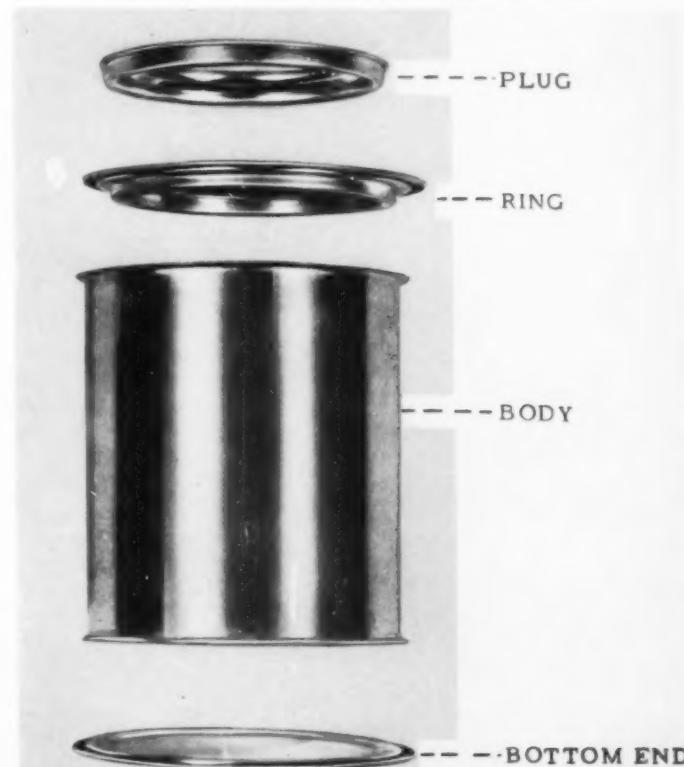
In evaluating a can for a particular product, primary consideration must be given to the performance of the metal from which the can is fabricated. The three major types used in container manufacture are tinplate, terneplate and uncoated steel which is called CMQ, or "Can Manufacturer's Quality" blackplate.

Tinplate, the most widely used of these, is rolled steel to which a thin coating of tin is applied either electrolytically or by dipping in molten tin. Tinplates produced by these methods of plating are referred to as electrolytic and hot-dipped plate, respectively. The combination of tin and iron has proved an ideal one, because it exploits the best characteristics of each. Steel is strong, ductile and relatively inexpensive, but also quite susceptible to corrosion. By contrast, tin possesses a high degree of chemical inertness and in combination with steel provides an economical plate of relatively good corrosion resistance.

Terneplate is a lead-tin alloy coated on steel plate by hot dipping and is used to package certain chemical-specialties products for which tinplate is not suitable. Because of the high lead content of the coating, terneplate displays better resistance than tinplate to the corrosive action of mineral acids or salts of these acids. Accordingly, it is used for such products as bleached shellac, which contains small amounts of these acidic materials. As a general rule, terne coatings do not perform favorably with products containing organic acids or salts since these chemicals tend to react with metallic lead.

In the acid pH range tin performs

3. DOUBLETIGHT CAN in quart size, shown in exploded view. This type of container is generally used for pastes and heavy liquid products requiring a wide opening and vaportight protection.



a dual role in protecting the base steel from corrosion. It protects electrochemically as a sacrificial element and it provides mechanical protection to the base steel by acting as a chemically inert overcoat. However, it performs this double protection role only in a relatively oxygen-free atmosphere under mildly acid conditions. For this reason almost all foods, and especially acid foods such as fruit products, have most of the air removed and thereby are sealed under low-oxygen conditions when packaged. Conversely, chemical-specialties products are generally formulated with an alkaline pH and no special efforts are made to reduce the air content in the containers. In the case of mildly alkaline water-base products incorporating suitable inhibitors, the tinplate container proves to be eminently satisfactory. Under these conditions, however, the tin provides only mechanical protection to the base steel.

In judging the suitability of containers for any chemical-specialty product, the plate of packed containers is examined with the aid of a low-power microscope for evidence of corrosive action. Three forms of corrosion may be encountered with water-base products. These are: (1) head-space or vapor-phase corrosion, which is induced by the combination of air and water vapor and has the form of red or brown rust; (2) detinning, that is, the solution of tin by the product, causing a dull gray discoloration of the plate; and (3) pitting or perforation of the plate.

Head-space corrosion, as previously mentioned, can generally be eliminated or minimized by selection of suitable inhibitors; in many instances volatile amine compounds which provide an alkaline atmosphere in the head-space region are used. Detinning is a natural phenomenon with respect to most water-base products and in a slight degree is relatively innocuous. If very severe detinning occurs, it can usually be traced to some constituent of the product which is known to be specifically reactive with tinplate.

Pitting of the plate is generally the result of local galvanic-cell action and may develop due to a variety of causes. Basically, it is caused by a reversal in the electropotential between the tin and steel, resulting in preferential attack on the steel base. One of the more common causes of pitting attack is product instability or breakdown leading to clinging deposits of

solid material, generally in the bottom of a can. The small areas of plate covered by these deposits become subject to what is termed a shielding effect and a galvanic cell may be established between these shielded areas and the adjoining uncoated plate areas. Depending on the chemical nature of these deposits and the electrolytic potential of the product, a pitting-type attack may develop under the deposits, sometimes resulting in actual perforation of the plate. Diagnosis of these pitting or perforating problems can be an exacting process, involving extensive exploratory test packs and screening tests. Frequently, certain constituents in the product are found to be the causative agents and the elimination of these components will generally resolve the difficulty. If, as occasionally happens, the offending components occur naturally in the product, then other measures may be taken to protect the tinplate, such as the application of protective organic coatings or enamels.

Most containers made for chemical specialties are not enameled, but when required there are a number of types of enamels available for use. All involve a compromise in the favorable characteristics desired in an enamel coating. These include chemical inactivity, more complete coverage and product resistance. The selection of the proper type to use for a product must often be made on the basis of test observations and enameled cans packed with product should be periodically examined to determine performance characteristics.

In order to be judged as satisfactory, an enamel should remain hard and adherent to the plate throughout the entire area of the can. It should not be attacked by the product and should provide good coverage of the plate. Coverage, which is a function of the continuity of the enamel film, is a relative term and in actual practice is never absolutely complete.

The can manufacturer also must carefully consider the selection of end-sealing compounds for each class of product. However, these materials usually do not enter the can user's evaluation of containers, as they are hidden from view and perform their job anonymously. Let it be sufficient to say that the end seams of containers must be leakproof and the sealing compound must be unreactive with the product being packed in order to fulfill its function.

The cap liner installed in the screw cap of an I-style can is constructed of a resilient backing which is faced with one of a variety of liner materials. These liner materials may be metal foil, such as tin or lead, or may be fibre or paper coated with chemically resistant organic coatings.

The facing material used for a particular product should exhibit product-resistance characteristics similar to those noted for enamels and container tests are necessary to determine this. One would expect that a particular type of cap liner would be equally leakproof for a number of products, but this is not the fact, because product reactions with different liners will produce varying effects on the seal achieved. The sealing efficiency of cap liners is a combined effect of the backing and facing and the manner of application of the screw cap. Container tests in which an accurate check is made of the weight loss of a volatile product during storage are necessary to determine the tightness of the seal made. In such tests the containers filled with product are closed by applying a constant closing torque to the screw cap with a torque wrench. The closed containers are then weighed and stored. Periodically they are removed from storage and reweighed. The product weight loss is an accurate measure of the effectiveness of the seal.

The tightness of the screw cap is important even with products which are not highly volatile and thus not subject to abnormal weight loss on storage. Often the effect of an inadequate seal is directly reflected in the condition of the container and the quality of the product after storage for a few months. A poor seal will permit air diffusion into the container and may result in accelerated corrosion and product deterioration.

The side seam of metal containers can be formed and sealed in a number of ways. For dry or paste-type products the side seam may simply be folded and bumped, or it may be sealed with an adhesive material after it is formed.

The more usual construction to produce the tight side seam necessary for liquid products like polishes involves the use of side-seam cements or metallic solders. This will allow three possibilities, because a soldered can may be soldered on the inside or on the outside of the body.

(This article continued on page 208)



LOOK AT THE FLOOR...

you can see why this cap speeds production

Run Armstrong Hi-Tork® Caps for a few hours, then check your floor. Notice how clean it is—how free of the mess of broken caps often found around high-speed lines.

You see a cleaner floor because the extra strength in Hi-Torks reduces breakage. Each element of the cap—dome, thread, and skirt—is carefully designed to take exactly its share of

torque and impact. This extra strength means you can run your lines at higher speeds with no increase in cap breakage.

We'll be glad to help you set up this test. For details, call your near-by Armstrong office or write Armstrong Cork Company, Glass and Closure Div., 5302 Crystal Street, Lancaster, Penna.



Armstrong "HI-TORK" MOLDED CAPS

Questions & Answers

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 575 Madison Ave., New York 22, N. Y. Your name or other identification will not appear with any published answer.

Polyethylene-coated paper surface

QUESTION: We notice that some polyethylene-coated paper has a glossy surface on the resin side and some has a dull surface. The coated paper with the bright surface does not handle well in our forming operation. Are these differences due to the use of various kinds of resins, or to other factors?

ANSWER: The differences in the surface appearance of polyethylene coating on paper are usually due to the type of coating equipment and to the method of processing. Different types or kinds of polyethylene resin will not show variations of this kind. If the hot-resin coating is chilled rapidly against a polished chrome roll, the surface will have a high gloss. A high gloss can also be obtained by remelting the resin surface and air cooling. If the hot-resin coating is cooled against a matte finished roll or slowly cooled, then the surface of the coated paper will be dull.

Tests have shown that the high-gloss surface has a greater drag or a lack of slip in comparison with the dull-type surface when both are pulled over polished steel surfaces.

It is possible to improve the slip of any resin coating by using certain types of anti-tack powders or waxy coatings. However, these surface treatments or additives may interfere with heat sealing and, therefore, should be used only after thorough testing and then only in controlled amounts.

Testing for moistureproofness

QUESTION: Our laboratory has been making moistureproof tests on many different kinds of packaging materials, using its own method. The results on cellophane and plastic films are constant and uniform, but laminated glassine and similar paper constructions give us erratic and variable test

results. These test results also do not agree with published values for these papers. Why does this class of moistureproof materials give unusual results in our tests?

ANSWER: Laminated paper can show as uniform and as constant test values for moistureproofness as plastic films or any other class of packaging materials if properly tested. However, laminated papers can show variable and erratic results if the test is performed at humidities higher than 95% or if water is used in the test cup. Apparently these materials are affected by excessive moisture or by contact with water, while many plastic films show that no change takes place under such conditions.

It is suggested that your laboratory use the method of measuring water-vapor permeability developed by the Technical Assn. of the Pulp and Paper Industry. This method, if carefully followed, will give uniform and reproducible results for all moistureproof materials.

Slippage of stacked cartons

QUESTION: We are having a problem with the slippage of stacks of printed folded cartons. These are large cartons made from a smooth-finish board and with a heavy ink coverage. Stacks of the cartons slide very easily and this causes difficulties in all our operations. Is there any spray or coating we can use on the cartons to prevent slippage?

ANSWER: There are many different types of sprays being used by the printing industry to prevent ink offset. The compounds used can be waxes, gums, starches, resins, etc., either in dry or liquid form. The primary purpose of these sprayed-on compounds is to prevent ink offset, but they can also change the slip characteristics of the printed sur-

face. It would be a simple matter for your laboratory to measure the slip of printed boards with various spray compounds over the ink. Certainly some sprays will show less slippage than others.

There has also been some work done by the ink companies in changing the slip characteristics of the ink surface. Some of the results have indicated that a wide range of slip can be formulated into the inks. It is suggested that you try both the inks as well as the use of sprays to solve this problem.

Polyethylene for distilled liquor

QUESTION: One of our products is distilled liquor that has an unusual flavor and aroma. Our tests have shown that polyethylene bottles do not affect the flavor and aroma, but flavor and aroma appear to be weaker after several months of storage. Can we stop this flavor loss in a polyethylene bottle? If not, can we use a polyethylene liner in a metal cap on a glass bottle?

ANSWER: There have been many attempts to use polyethylene bottles for the packaging of many types of distilled liquors. In every case the loss of flavor and aroma was so rapid that these bottles could not be considered satisfactory for normal distribution and shelf life. Unfortunately, this failure is due to the basic chemical nature of the present types of polyethylene resin and these types of flavor and aroma.

As a result, there is no answer to this problem today.

However, you will have nothing to fear from flavor or aroma losses with a polyethylene liner in a metal cap on a glass bottle. In this case, the resin will make an excellent seal and will serve in all other capacities as an excellent cap liner.

Highlight your sales message on DU PONT CEL-O-SEAL BANDS

REG. U. S. PAT. OFF.



"Ever since we began manufacturing Harpel's Distinctive Dressings, we fully guaranteed them to the wholesaler, the retailer, and the consumer—but we never said so right on the bottle itself. Now colorfully printed Du Pont 'Cel-O-Seal' bands impart this guarantee in no uncertain terms.

"Moreover, the bands give the dressings an attractive family appearance on the shelf—retailers give us choice display space—while consumers appreciate the added assurances of 'sealed-in' quality and flavor."

Says John J. Harpel, President
ZEFER PRODUCTS, INC.

Self-selling packages are the answer to today's speeded-up shopping habits. Du Pont "Cel-O-Seal" bands give you a competitive package by carrying sales messages, brand names, and suggested uses right to the point of sale—where more and more buying decisions are being made. These distinctive bands—available in a variety of colors and sizes, narrow neck or wide mouth—can be an attractive label or secondary closure—or both. They may be applied by hand or by machine.

Free packaging service: See what "Cel-O-Seal" can do for *your* products. Send in your package. Du Pont packaging specialists will band it, make recommendations, return it to you for inspection. No obligation, of course! Write: "Cel-O-Seal" Section, E. I. du Pont de Nemours & Co. (Inc.), 10424-A Nemours Building, Wilmington 98, Delaware.

"Cel-O-Seal" cellulose bands are also sold by
Armstrong Cork Co., Lancaster, Pa.

DU PONT CEL-O-SEAL BANDS

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REG. U. S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

Equipment and materials

A COMPLETELY TRANSPARENT COVER-ALL LID

for paper food containers has been developed by Plax Corp., Hartford, Conn., in conjunction with the research departments of several package manufacturers. The lid is formed from 10-mil



Polyflex, Plax's oriented polystyrene sheeting, and is reported to be odorless, to impart no taste to food and to be dimensionally stable. Its temperature range makes it satisfactory for use in home and store freezers and it withstands heats used in packaging foods in waxed containers, the company reports. The lid forms a primary seal with the cup's bead and has an overlap for the brim, providing a completely sanitary seal. It has high gloss and can be printed by the flexographic, silkscreen or hot-stamp processes and embossed during forming. The lids are offered by the Dixie Cup Co. for use with their 8-, 12- and 16-oz. containers.

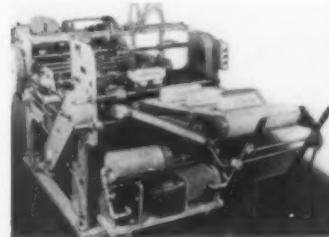
A NEW SLEEVE VALVE FOR MULTIWALL BAGS

introduced by the Bemis Bro. Bag Co., 408 Pine St., St. Louis, Mo., is reported to function in much the same manner as a check valve in a water pipe which permits the water to flow freely in one direction but not in the other. It is said to offer cleaner, quicker and more positive closures with minimum leakage and maximum sifting protection. The new "Mr. Little" sleeve valve also is reported to reduce the chance of moisture getting into the bag through the wick action of hygroscopic products. At present, the new sleeve valve is supplied principally for the fertilizer trade, although it is being tested for use with powdered and pulverized materials.

Also announced by Bemis is a new side-seam polyethylene bag. The new "Fine-Weld" construction is reported to produce a seam that is stronger than the polyethylene film itself and results in a seamless-bottom polyethylene bag that provides full front and back surfaces for brand printing, uninterrupted by center seams.

SPEEDIER CIGARETTE-CARTON PRODUCTION

is reported by International Paper Box Machine Co., 315 Main St., Nashua, N. H., with its new Int-O-Matic box-forming machine. The maker guarantees the machine to produce 7,500



cartons per hour against the approximately 3,000 boxes per hour produced by other equipment. Responsible for this speed up are (1) a new-type suction feed capable of holding a much larger quantity of cigarette blanks for sustained production speeds and savings in manpower, (2) the ability to pre-break the carton glue tabs before the forming operation so that all boxes are glued uniformly and (3) a new-type positive suction ejection mechanism permitting delivery of the finished formed and glued cigarette cartons to a central conveyor system.

LOW-COST PRISMATIC COLOR PHOTOGRAPHIC PRINTS
made directly from a dummy package, from a new container, or from flat artwork are available from Bebell & Bebell Color Laboratories, 108 W. 24 St., New York 11. This new method

of making prismatic color photographic prints enables a new package design in full color to be submitted to any number of people for approval and comment, at small cost, while still in the dummy stage. Color prints for salesmen, distributors, etc., can be made available faster and cheaper by this new method.

AUTOMATIC WRAPPING OF FROZEN MEATS

in a conforming plastic wax has been announced by Sure-Seal Corp., Salt Lake City, Utah. The new machine, called "Cote-Amatic," offers full line-production operation for commercial



frozen-meat packaging, according to the company, and is capable of wrapping up to 24,000 lbs. of frozen meat per day, employing only two operators. The plastic wax, called "NoAir Wrap," makes a skintight coating that protects frozen meats from dehydration or freezer burn during storage, according to the supplier. The wax, after the meat has thawed, is peeled off in one piece. Left in the wrapper, meat is said to remain fresh for several days after removal from the freezer. The Cote-Amatic machine is available to frozen-meat packers under a lease agreement.

NEW RE-INFORCED PROTECTIVE PAPERS

offered by the Thilmany Pulp & Paper Co., Kaukauna, Wis., are made with a controlled pattern of re-inforcement that is said to provide maximum protection at minimum cost. The asphalt-coated, fibre-reinforced paper, which comes in sheets as wide as 120 in., is made in medium, heavy and super weights. All grades can be supplied in a machine-creped kraft for extra flexibility and can be trademark printed. The paper can be used for wrapping radios, electric equipment, steel and cast iron, machinery and repair parts, tires, furs, furniture, dry

goods, putty, plastic clay and firebrick. The company recommends the moistureproof paper as covering for car doors, gondola cars and truck bodies. Other uses for which it is said to be suitable include shipping sacks, liners for shipping cases and crates, insulation and nursery plant wrappers.

A SIDE-SEAMING ADHESIVE

for tinless metal containers used in the packaging of lubricating oils has been announced by the Borden Co.'s Chemical Div., 350 Madison Ave., New York 17. The new product, Cascorez HM-901, eliminates the use of solder in containers of this



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The Barbasol Company
The Bayer Company Division of
Sterling Drug Inc.
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The Best Foods, Inc.
Block Drug Company
John H. Beck, Inc.
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The Carter's Ink Company
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Corega Chemical Company
Crescent Mfg. Co.
E. C. De Witt & Co., Inc.
E. I. Du Pont de Nemours & Co., Inc.
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Eli Lilly & Company
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Western Cartridge Company
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Whitehall Pharmacal Company
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Nicholas Proprietary Ltd. (Australia)
E. R. Squibb & Sons (Argentina)
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The eminence and notable success of these concerns, and the wide variety of their cartoned products, suggests the wisdom of bringing your cartoning problems to Jones.

JONES Constant Motion CARTONERS FULLY AUTOMATIC

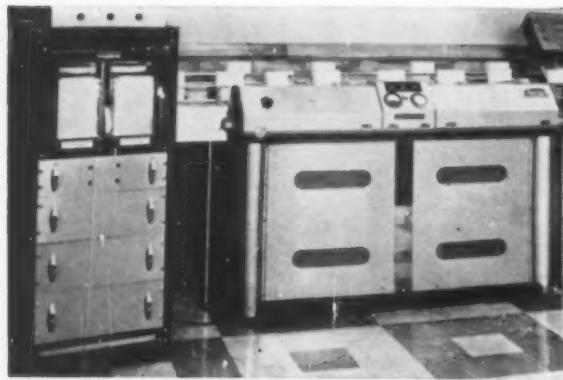
Feed and open cartons; insert single or multiple loads; glue or tuck flaps of cartons — airplane or reverse tuck. Fold and insert leaflets, booklets, corrugated liners; print or stencil code; are convertible to different sizes of cartons and loads.

P. O. BOX 2055
CINCINNATI, OHIO



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- ... checks every package, eliminates "sampling"
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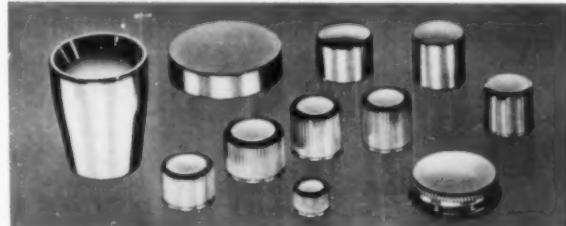
914 W. Fifth Avenue, Columbus 8, Ohio
In Canada: P. O. Box 179, Station S, Toronto 18, Ont.

Equipment and materials

type. Extensive field trials are reported to have shown that this thermoplastic-type adhesive reduces leakage in containers to a minimum. The bare metal strip adjacent to the seam is eliminated through the use of this adhesive, making possible lithographic designs around the entire package.

GOLD METALLIZED CLOSURES

having excellent resistance to abrasion and the effects of alcohol and essential oils, according to the manufacturers, are being offered to glass packers by the Closure and Plastics Div. of



Owens-Illinois Glass Co., Toledo, Ohio. The closures have been produced with particular attention to the toiletry and liquor markets. Silver, red, blue, amber and other color closures are also available. Recent refinements in manufacturing techniques, including the development of an improved lacquer, are credited with making the closures available at a reasonable cost.

NEW TEFLON PRESSURE-SENSITIVE TAPE

called Temp-R-Tape T is being made by Connecticut Hard Rubber Co., New Haven, Conn., from Du Pont Teflon coated with a silicone polymer adhesive. Recommended as a facing material on forming dies and sealing platens of packaging machines, it is reported to have an advantage over coatings in permitting replacements on a job with little down time. With a temperature range from minus 80 deg. F. to 400 deg. F., it is reported to adhere well to plastics, metals, ceramics and most other materials, especially at sub-zero temperatures.



NEW WINDOW-TOP CANS

for packaging oysters and crab meat are being manufactured by the Steel & Tin Products Co., President & Fawn Sts., Baltimore 2, Md. The metal-can tops are made of sheeting extruded from clear Tenite acetate supplied by Eastman Chemical Products, Inc., Kingsport, Tenn., and extruded by the Midwest Plastic Products Co., Chicago Heights, Ill. Metal rim of the transparent tops can carry product or trade name. Cans are supplied with the window sealed onto one end and packers have only to seam the lid on as usual.

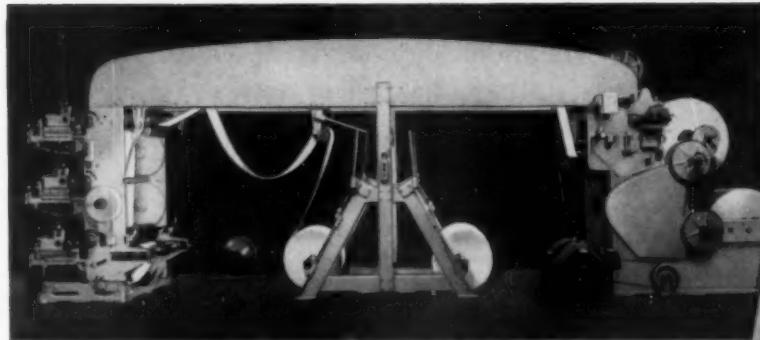


A NEW WEATHER-RESISTANT BOARD

for outdoor signs has been introduced by Mead Board Sales, Inc., 3347 Madison Road, Cincinnati, 9, Ohio. The new Mead Chestnut outdoor sign board comes in the following calipers: 0.050, 0.060, 0.080, 0.100 and 0.120. The 0.080 board weighs 325 per 1,000 sq. ft., $\pm 5\%$ and has a Mullen test of 310 lbs. minimum, according to the maker and rigidity standards are

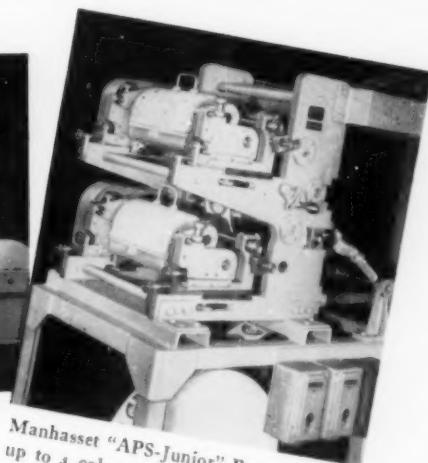
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For multicolor roll-to-roll printing, coating, tinting of any flexible packaging material . . . choose a modern **MANHASSET FLEXOGRAPHIC PRESS**. Engineered to deliver high-volume production and critical precision quality, **MANHASSET** presses incorporate many new advance-design features that assure first-class printing and maximum performance efficiency. Available in any size for printing cellophane, polyethylene, foil, tissue, kraft, box-board, other films and papers . . . in 1 to 6 colors . . . on any web width to 60".



Manhasset "APS-Junior" Press . . . prints up to 4 colors on webs up to 12" wide.

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SATISFACTION GUARANTEED and YOUR MONEY BACK

Faster, neater bagging . . . at lower cost . . . pays you many times the price of this easy-to-use bagger. Blower opens bag; your operator fills and removes it in one swift motion. Adjustable for bags from 2 1/4 to 5 inches wide and 5 3/4 to 7 1/2 inches high. Glad to quote for other sizes or cellophane.

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Use this bagger a full week. Be 100% satisfied or return it for refund.

Just send samples of your bags and ask for Bulletin 2-29



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OPAQUE POUCH PAPER
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If You Print
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It will pay you
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**PLASTIC
& RUBBER**
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The odds are that your packaging can be printed better, faster and with less down time by using new developments in rubber or plastic printing plates.

We will be happy to send you the name of a reliable platemaker in your area who will show you the advantages of the latest developments as they apply to your specific requirements. There is no obligation whatsoever.

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AND COMPANY, Incorporated
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Foremost Supplier of Machinery, Materials and Methods
for Rubber and Plastic Platemaking Essentials.

Equipment and materials

reported as follows: strong direction, 160 minimum; weak direction, 400. It is said to withstand 48-hr. submersion in water under specified conditions of depth coverage, water temperature and circulation 15% maximum weight pick-up. Maximum allowable expansion of the board in machine direction is reported as 0.050 in. in 36 in. and in cross direction, 0.150 in. in 36 in., with maximum allowable ply separation $\frac{1}{8}$ in.

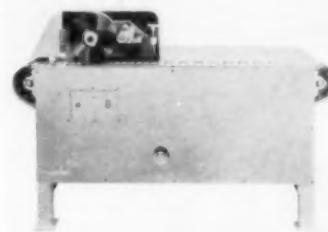
A FULLY AUTOMATIC CYLINDER BEADER

has been announced by the Taber Instrument Corp., Section 12, 111 Goundry St., North Tonawanda, N. Y. Its Model 147 sheet plastic cylinder beader has an automatic device that automatically ejects finished cylinders into hamper or carton. Thus one employee can operate both the cylinder maker and cylinder beader. The new model is reported

to have a faster production rate—500 to 900 cylinders per hour, depending on cylinder size. It will bead cylinders $1\frac{1}{2}$ to $8\frac{1}{2}$ in. in diameter and $1\frac{1}{2}$ to 15 in. long and handles 0.007- to 0.015-in.-thick cellulose acetate or other materials with equivalent physical characteristics.

NEWEST FLAT-SURFACE PRINTER

introduced by Markem Machine Co., Keene 47, N. H., is said to print complete label detail in one operation on flat objects up to 30 in. long. Objects are manually fed to the Model 65A machine, which uses a sponge-backed rubber printing plate. Multiple printing heads are available for multiple-color printing. Maximum size of imprint is $1\frac{3}{4}$ in. wide by 30 in. long. Operating speed varies with object size, but hack saw blades measuring $2\frac{1}{2}$ by 30 in., for example, can be marked 30 per minute. Typical applications include marking flat boxes, hack saw blades, tile squares, can tops, abrasive stones and other flat objects.



PERMANENT-TYPE SELF-ADHESIVE PAPERS

are being offered by the Avery Paper Co., Painesville, Ohio. The company's "Fasson" self-adhesive label and sign papers are being produced with a permanent-type pressure-sensitive adhesive, in addition to the removable type. The "Sta-Fas" adhesive provides a self-adhesive label stock that cannot be removed without destroying the label. It is said to hold tighter as time goes on, but may be readily removed a few hours after application. The new permanent-type self-adhesive papers come in a large variety of stocks.

GLOSS MOISTURE-SET INKS

that will set and harden in from 15 to 30 min. on most stocks have been announced by McCutcheon Bros. & Quality, Inc., 2653 N. Reese St., Philadelphia 33. On some stocks the inks are dry enough immediately after printing to rewind with

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HI-SPEED AUTOMATIC
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AMSCO HI-SPEED Automatic Rotary Sealer for smooth, continuous, non-intermittent operation (including code dating) and perfect sealing of all heat sealable materials with heat, pressure and time fully controlled . . . automatically.

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Descriptive literature and complete equipment sent on request. Write Dept. 101

AMSCO PACKAGING MACHINERY, INC.
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Methods for Bag Sealing • Bag Making • Bag and Carton Weighing and Filling • Wrapping • Labeling • Sealing and Closing

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TWIN-LOK
ASSEMBLED
SELF-LOCKING
PARTITIONS

Combination top and bottom lock means precision alignment . . . each section held exactly in the right position. Prevents bottle hang-ups and cuts handling costs.

Rugged construction reduces bottle breakage. Extra rigid design . . . made of highest quality hard-sized container chip. Extra smooth finish insures against label scuffing. Also available for use with non-returnables in lower caliper board—assures maximum protection at minimum cost.

Shipped preassembled and ready for use, TWIN-LOK Partitions require minimum storage space. **WRITE FOR QUOTATIONS.**

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MAXIMUM PROTECTION FOR UNIT PACKAGING

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STICKS**
You'll Find A Use For

IMI
SILICONE
FLUID SPRAY

ON FILM SEALERS, CRIMPER JAWS, EMBOSsing ROLLS, PANS; STAMPING, FORMING DIES—MOLDS OF ALL KINDS

SIMPLY SPRAY ON THIS PURE
SILICONE FLUID COATING

And your sticking problems are over!

The most economical way to apply
costly Silicone Release Agents!

**SAFE — NON-TOXIC
CLEAN — LONG LASTING**

Handy Self Dispensing Can

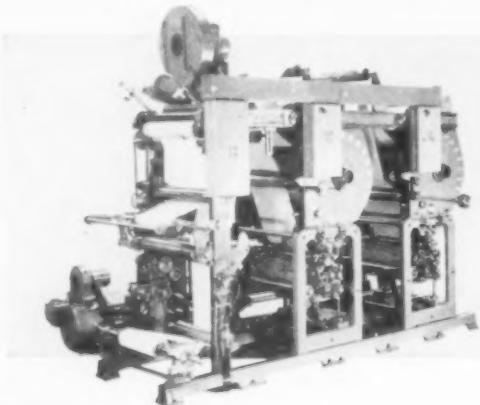
Has No-Fumble, Speedy Spray Head

PRICES (Delivered)

Sample Can.....	\$2.00
Per Unbroken Dozen.....	\$18.00
Per Unbroken Gross.....	\$197.40

INJECTION MOLDERS SUPPLY CO.
3514 LEE RD. CLEVELAND 20, O.

50 years of engineering and proven research in building precision rotary presses



2 COLOR ROTOGRAVURE
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- to address multiple shipments (Spot Carbonized can give you 6 copies).

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producers of
"able labels"

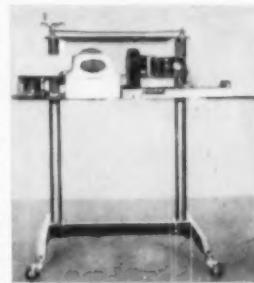
Dept. MP2, 385 GERARD AVENUE, NEW YORK 51, N. Y.

Equipment and materials

little or no offset, the company reports. They dry with a gloss comparable to that obtained with slow-drying linseed-oil types. Called Supersheen, the inks are said to be especially adaptable to printing on corrugated boxes and multiwall kraft bags.

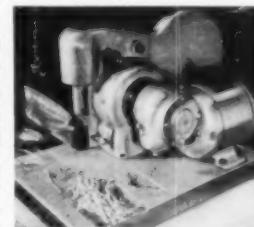
AN IMPROVED HEAVY-DUTY BAND SEALER

designed for continuous high-speed sealing of plastic film, has been announced by Doughboy Industries, Inc., Mechanical Div., New Richmond, Wis., as Model CBS-AT, successor to Model CBS. With the addition of an optional heater section to the machine, heavier materials, including foils, plastic-coated kraft papers and heavy scrim-back laminates conforming to military packaging specifications, can be sealed. The sealer also is adaptable to handling cellophane, for which a bag-top folder is another optional feature. An ink coding device for imprinting a code or date on the bag top in a pre-determined position is available as an integral part of the machine.



A MACHINE FOR TYING MIDGET CASINGS

is said to speed up the application of aluminum closures and pre-tied string loops on midget casings for cheese, sandwich spreads and meat products, according to Tipper Tie, Inc., 1018 Stuyvesant Ave., Union, N. J. Known as Tipper Tie, Jr., the machine reportedly applies 1,000 closures and string loops per hour—a speed 350 times faster than hand tying. The machine which feeds the aluminum tape and crimps it to make a tight closure, also can be adapted to put closures on double casings. The machine ties any light casing that can be easily gathered by hand, such as saran, Pliofilm, cellulose and polyethylene from 1/8 to 3 in.



SMALL AEROSOL CONTAINERS

in a variety of shapes, sizes and designs are offered by Ronor Corp., 1360 W. Ninth St., Cleveland 13, Ohio. Sizes range from less than 1 oz. to 3 oz. net contents and come in square, rectangular and bottle shapes. A variety of colors, coatings and decorations also is available. The aerosol illustrated is finished by the electrolytic application of aluminum covered with a lacquer finish. The can is made from two pieces of stamped-out steel pressed together and permanently joined by soldering or brazing processes. The valve body is screwed into a steel insert attached to the can.

A NEW FLEXIBLE LABEL

has been developed by Fleetwood Press, Inc., 1668 Boone Ave., New York 60, for labeling polyethylene or other flexible plastic or rubber containers. When a plastic bottle is squeezed, the new

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Artcote pyroxylin-coated paper
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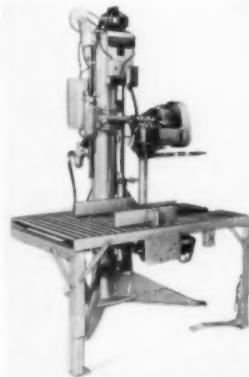
Equipment and materials

label reportedly gives with the bottle but returns to its original shape when pressure is released. The labels are applied by conventional methods, requiring no change in equipment.

A NEW STAPLER FOR CORRUGATED CONTAINERS

which fastens the top and bottom flaps of the containers entirely from the outside is being offered by Bostitch, 1021 Mechanic St., Westerly, R. I. The two stapling heads of the new Boxlok D12BT drive wide-crown pre-formed staples at the rate of 100 per minute, it is reported. Bottom stapling is done by an inverted head that operates from a stationary position below the roller-type work table. The top head adjusts automatically to the height of the container. When only top sealing is required, the bottoming head can be shut off. The new machine is said to fasten corrugated board of almost any thickness. Containers ranging from 4 by 4 in. to 24 by 24 in. at standard table height with no limit on length can be handled.

The unit adapts to continuous changes in box size without manual adjustment. Containers are centered automatically as each staple is driven.



POLYETHYLENE-COATED KRAFT

now being offered by the Guardian Paper Co., 4246 Hollis St., Oakland 8, Calif., was developed after 12 months of experimental work. A beta ray gauge that measures the thickness of the coating before and after application as the paper travels through the machine is said to be accurate within $\frac{1}{2}$ to 1%. The manufacturer reports that "remarkably even film" has been recorded.

A NEW CHECKWEIGHER

that reportedly can detect a weight differential of $\pm 1/60$ of an ounce at speeds up to 130 per minute is being offered by the Bartelt Engineering Co., Rockford, Ill. Designed to be incorporated as an integrated in-line unit of a continuous packaging system, the Model CWA checkweigher handles packages up to 4 $\frac{1}{2}$ -by-7 $\frac{1}{2}$ -in. base size and cans or glass jars up to 5 $\frac{1}{2}$ -in. diameter. Normal weight range falls between $\frac{1}{2}$ oz. and 10 lbs. Cartons are handled with a pusher-type loader; cans or jars by a worm-type loader. Two- or three-way segregation is possible, depending on needs.



that is reported to triple production, thus eliminating the bottleneck between freezer output and wrapping capacity, has been announced by Curt G. Joa, Inc., Sheboygan Falls, Wis. It is said to reduce labor costs, eliminate tearing, handle a wide range of weights of paper and foil and to be adaptable to wrap bars of various sizes from vending-machine to dessert portions. Only slight modifications are required to handle any bar type or

A NEW-TYPE ICE-CREAM-BAR WRAPPING MACHINE
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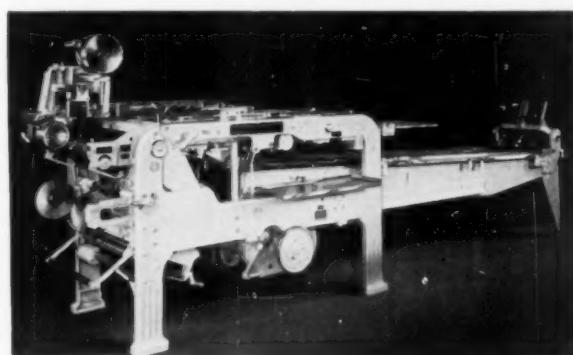
The versatile "Oliver" saves more because it does more



Textiles, baked goods, paper specialties, bacon, frankfurters. If your product is remotely similar to any of these, an "Oliver" will give you fine packages at low cost. Using cartons, trays, U-boards, cards, or without supports, it neatly wraps and securely heat or glue seals your product for utmost protection. It also heat seals a smart label to the package. "Oliver" quick adjustability means less down-time. Each of 8 models handles packages in a wide range of sizes—speeds up to 50 a minute. Infeed conveyors 6 to 15 feet long. Printed wrappers registered by an electric eye. "Oliver" features will save you dollars daily. Write for details.

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Automatic Labeler heat seals a roll-type label (printed by Oliver) to the wrapper. Label can be imprinted with essential information just before it is applied. Imprint items changeable in a few seconds. Labeler—with or without Imprinter—can be attached to other makes of wrapping machines. Get all the facts.



"Oliver" Wrapping Machine

with Automatic Roll-Type Labeling System

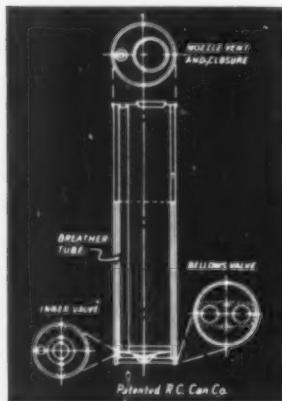
OLIVER MACHINERY COMPANY • GRAND RAPIDS 2, MICH.

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- **Sturdy Bellows Diaphragm** . . . Built for roughest usage.
- **Rapid, Non-Binding Bellows Action** . . . Free-working at all times, moisture-resisting stock for all climates.



It takes a quality product **PLUS** a quality-engineered container, to ring up over 5 million bug-duster sales.

Many garden and insect dust packers realized this when they brought their products to R.C. engineers to be "dressed up" in an efficient package. The R.C. SPRA-CAN was the answer—a specific answer to the strong consumer resistance to past inferior, make-shift dusters.

The result is a winning combination: a sturdy container that provides the favorable first impression . . . a fool-proof, dependable design that assures lasting satisfaction (and profit-building resales)!

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Equipment and materials

shape within certain ranges—including such products as candy, soap and other small products. The machine, developed after more than a year of research, is completely automatic.

NEW SEMI-AUTOMATIC BAG OPENER AND FILLER announced by the Tele-Sonic Packaging Corp., 1170 Broadway, New York 1, is reported to reduce filling costs of users of polyethylene, cellophane, paper and other bags. Both soft and hard

products can be rapidly inserted into bags with the Tele-Sonic Bag Opener. The magazine of the machine holds a stack of bags and controlled air pressure, supplied from inside the unit, opens the top bag. The item being packaged is then guided through the product guides into the waiting bag.



AN IMPROVED MECHANICALLY OPERATED SCALE announced by the Richardson Scale Co., Clifton, N. J., maker of the GGG-38 bagging scale, is reported to operate 40% faster than the previous model, with no loss in accuracy. Modifications of the scale also enable it to handle materials that formerly could not be accommodated.

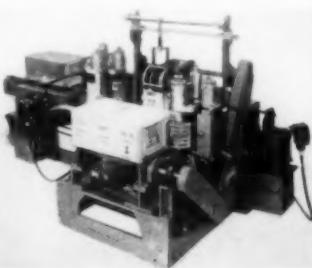
PRE-FABRICATED DECORATIVE BOWS



are reportedly turned out at better than $2\frac{1}{2}$ bows per minute by a new bow tyer recently introduced by Minnesota Mining & Mfg. Co., Dept. R-1622, St. Paul, Minn. Called the S-10 "Magic Bow" tyer, the new unit is intended for retailer use in forming basic pre-fabricated bows for more than 100 bow variations, as well as for ready-to-use carnation bows. It takes ribbon $\frac{7}{16}$ to $1\frac{1}{2}$ in. wide.

THREE NEW IMPRINTING DEVELOPMENTS

have been announced by Adolph Gottscho, Inc., Hillside, N. J. One is an adjustable mounting designed to permit installation of two "Rolacoder" marking units in minimum space for simultaneous marking of both top and side of a container. The mounting may be adjusted for marking on one side only if desired. A new machine for imprinting top, ends and side of wooden wirebound crates (illustrated) on the production line is said to be engineered for consistent, high-quality marking at fast production speeds. This machine is set up on a production line where it can receive the cases from a



CONSTRUCTED of STANDARD PARTS

making it easy to lengthen the conveyor if increased production makes this necessary. Obsolescence of equipment is eliminated. Ideally suited for the pharmaceutical, cosmetic, aerosol packaging, drug and chemical, plastics, food products and baking industries.

*Wider widths and boosters available.
Advise us of your requirements*

**the customer helps
you sell him again
when you use
Lermer
plastic
containers**



**COMPARE THESE UNEXCELLED ADVANTAGES OF
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- They Are Shatterproof, Assuring Customer Good Will
- 75% Lighter Than Glass, Saving You Money in Packing and Shipping
- Not Affected by Alcohols, Alkalies, Weak Acids
- Tasteless and Odorless
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- Always Uniform for Easy Labeling, Filling and Capping
- Available with Metal or Plastic Closures

Write for complete catalog information and samples. Detail your problems and let our creative staff help. Lermer is famous for Experience, Service and Creative Engineering.

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and Specialists
in Plastic
Containers

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again
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Shatterproof, Lermer plastic containers have high utility in themselves. Your customers will find them useful for keeping anything from fishing flies to pins and needles. You benefit too, from these extra uses. The customer places new values on your Lermer packaged merchandise, and the extra brand exposure you get assures recognition when he buys again.

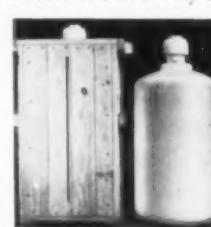


Equipment and materials

packing-line conveyor, print them and discharge them to the next station. Automatic addressing of cases by the company's Rolacoder imprinter has been made possible with a new "zip-change" mechanism that enables shippers to mark as few as a dozen cases with the same address, then quickly change the low-cost rubber dies for the next lot of cases.

A NEW STACKABLE CARBOY

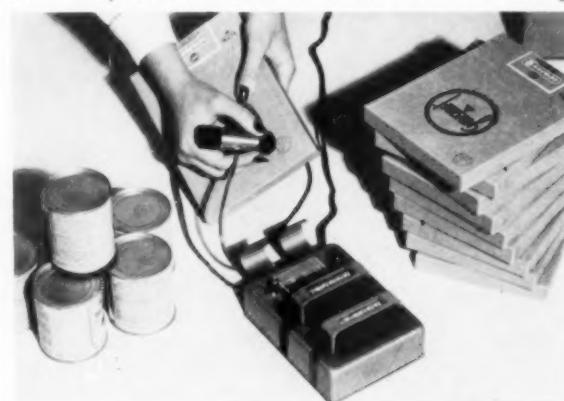
produced by the Industrial Safety Supply Co., Inc., Hartford, Conn., consists of a light-weight wood jacket and polyethylene bottle. The new Poly-Box carboy is available with Plaxpak carboy bottles of 6½ and 13-gal. capacities.



The wood jacket contains a safety-filling liquid-level slot and triangular corner posts guard against damage from rugged use. An opening in the base of the jacket permits easy and safe stacking, while a skidded bottom allows handling by lift trucks. Both jacket and polyethylene bottle have been approved by the ICC.

A NEW MARKING AND COUNTING MACHINE

which differentiates between marks and counts, has been announced by the May Engineering Co., 6055 Lankershim Blvd., North Hollywood, Calif. The machine's double-ended stamp



contains two microswitches and two stamps—one red and one black—which are of the porous or self-inking type. The two counters are identified with red or black bands and the machine records the number of red or black stamps made.

MULTIPLE-POCKET POLYETHYLENE BAGS

have been developed by Plastic Packaging Co., 734 N. Franklin St., Chicago. The bags can be either cut off with a given number of compartments or wound as a continuous roll. Double seals are provided so that separation can be made without damaging airtight seals of adjoining compartments. Lips and foldover laps also can be added. Possible uses include strip-type packaging of small parts, individual compartments for items such as sample color panels, and novelty items such as multiple map and insurance policy jackets.





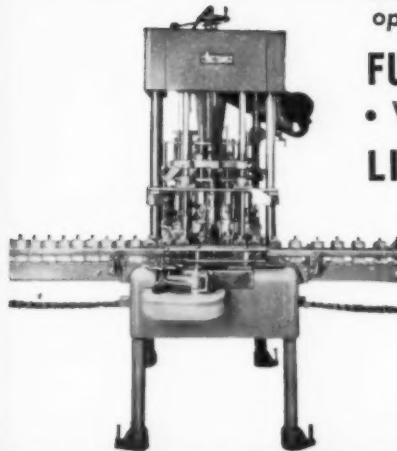
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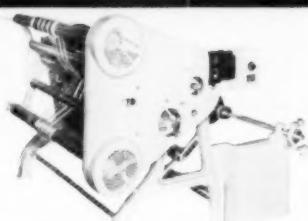
Manufacturers of a complete line of fully automatic and semi-automatic filling equipment and fully automatic labeling machines.

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From our three types of Hobbs cutters, use the best for your materials—shear-type, rotary contact, or razor-type. Easily handle tender, delicate film as well as heavier weights of paper, plastics and treated fabrics.

Hobbs Slitters and Rewinders (formerly "Jacques") are low-cost, low maintenance machines. Warner electric clutch and brake enable smoother starts and stops—protect light materials. Adjust power to clutch simply by turning rheostat button! Three models now available to cut widths up to 30", 40", 45". Special design frictions rewind up to 18" diam. Some materials up to 20/1000" thick.

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SLITTER & REWINDER

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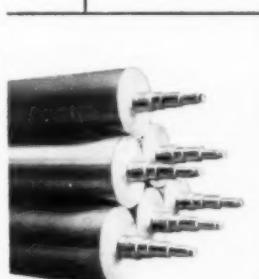
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"Roll 'em!"



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Plants and people

Dr. R. H. Lueck has been elected to the newly created position of vice president in charge of the research and technical



Dr. R. H.
Lueck



G. W.
Reese



R. C.
Stolk

department of American Can Co., New York.

New vice president for American Can's Atlantic Division is **G. W. Reese**. He succeeds **S. D. Arms**, who has retired after 42 years of service. **R. C. Stolk** is the new Pacific division vice president succeeding **C. W. Roberts**, who had been associated with the company in various capacities for 43 years.

W. K. Schmalzriedt has been made manager of the tin plate division of American Can's purchasing department, succeeding **W. J. Kaslow**, retired. **D. C. Storch** succeeds Mr. Schmalzriedt as assistant manager of the tin plate division. A purchasing department has been created in the Atlantic Div., New York, with **Warren V. Duke** as manager and **Charles A. Schults** as assistant manager.

Carl H. Hartman has retired as vice president in charge of multiwall bag development for the **St. Regis Paper Co.**, New York. Mr. Hartman, who will serve the company in a consulting capacity, developed a number of improvements in multiwall bag making and filling equipment and is active in the preparation of packaging specifications for materials supplied to Government agencies.

Frank Greenwall, president of **National Starch Products, Inc.**, New York, and **Richard Moss**, chairman of the board, **Clinton Foods, Inc.**, have announced that plans for the merger of the Corn Processing Div. of Clinton Foods with National Starch have been discontinued.

Reed-Prentice Corp., Worcester, Mass., subsidiary of **Package Machinery Co.**, East Longmeadow, Mass., has elected the following officers and directors: **Roe S. Clark**, chairman of the board; **Roger L. Putnam**, president; **Frederick W. McIn-**

tyre, Jr., vice president in charge of sales; and **Jackson R. Holden**, clerk. **Donald H. Dalbeck**, vice president and treasurer; **Iver Freeman**, vice president; and **Douglas L. Brennan**, assistant treasurer, were continued in these positions. Other board members include **Tom Miller**, **Harold Mosedale, Jr.**, and **Charles E. Palmer**.

Stone Container Corp., Chicago, corrugated box manufacturer, has agreed to purchase the outstanding stock of **W. C. Ritchie & Co.**, manufacturer of folding boxes and other paperboard packages, also of Chicago. W. C. Ritchie will continue under the same name and will operate as a separate subsidiary of Stone Container. Executive officers of Ritchie will remain the same and no change in personnel is contemplated. Stone Container recently completed a major expansion of facilities at its Chicago plant.

Russell C. Flom of **Marathon Corp.**, Menasha, Wis., has been appointed assistant administrator of the **Business & Defense Services Administration**, U. S. Department of Commerce. Mr. Flom succeeds **John A. Field**, who is returning to his former position as an executive of the Carbide & Carbon Chemicals Co.

Charles Sonneborn and **Carl E. Schaeffer**, both of whom have been in the employ of the **Stokes & Smith Co.** for 49 years, were recently honored by the company for their long terms of service. Awards were

presented to the two men by **Paul L. Davies**, president of **Food Machinery & Chemical Corp.**, parent company of Stokes & Smith.

Stanley M. Rumbough, Jr., has resigned as special assistant in the White House and has returned as vice president of



S. M. Rumbough, Jr.



Charles Stiassni

White Metal Mfg. Co., Hoboken, N. J., manufacturer of collapsible tubes. Mr. Rumbough has also returned to his position as president of **Metal Container Corp.**, Indianapolis, Ind.

Charles Stiassni, plant manager and secretary of **White Metal Mfg. Co.**, has also been elected treasurer of the firm.

Hazel-Atlas Glass Co., Wheeling, W. Va., has appointed **E. L. Casey** as regional sales manager, Pacific Coast. Mr. Casey succeeds **Fred L. Bower**, who is retiring. **Matt J. Olds** has been named assistant regional sales manager, Pacific Coast.

Hazel-Atlas has opened a new district sales office located in the Johnston Bldg., Charlotte, N. C., with **Cecil W. Fulkerson** as sales manager.

The Gardner Board & Carton Co., Middletown, Ohio, has promoted **Earle Turvey** to manager, carton sales. Mr. Turvey

succeeds **Robert Houk**, who has gone into business for himself in the Cincinnati area. **Romney Watkins** succeeds Mr. Turvey as Chicago district sales office manager. Gardner has added a paperboard sales department to its Chicago office with **Kenneth Dunn** as sales representative.

Fred Barber is now manager of Gardner's Middletown carton plant and two paperboard mills, with **Harry Hadley** as assistant manager. Mr. Hadley will also continue work in manufacturing services to Gardner's paperboard sales department and with paperboard customers. **William Csellak** succeeds Mr. Barber as superintendent of the carton plant.

Duncan Dunning has been made carton carrier salesman in the North Central States area and **James H. Groom** has been appointed to Gardner's sales staff.

Angier Products, Inc., Cambridge, Mass., manufacturer of industrial adhesives, has opened a Western Division in Hunting-

New Research Editor

Breskin Publications announce the appointment of **Jane F. Winik** as research editor of **MODERN PACKAGING**. She will serve in a similar capacity for the affiliate publication, **Modern Plastics**. Mrs. Winik's basic responsibility will be the heading of a department to collect statistical and economic data bearing on the packaging and plastics fields which will serve as background material for the editors. So far as possible, these services for special surveys will be available to packagers and suppliers. A trained analyst, Mrs. Winik was formerly a senior analyst in the Market Surveys Dept. at the General Chemical Div. of Allied Chemical & Dye Corp., New York. She is a graduate of Indiana University and has done graduate work at New York University's Graduate School of Business Administration.



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brighter
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smoother
FINISH



more uniform
COLOR AND TEXTURE

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secure permanent polyethylene printability

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- easy to apply and inexpensive
- detailed "know-how" furnished
- complete treating machines available

Difficulties formerly encountered in the printing, gluing and decorating of polyethylene are now over for the users of the Kreidl Process. There are more than 60 companies in all parts of the world licensed by us, some of them the largest in their field.

Printability is achieved by a patented heat treatment for film and tubing, bottles, pipes, coated paper and board, and extruded or molded articles. Once treated, at negligible cost, the polyethylene surface can be printed at any time and by any process. Commercial inks give a permanent print that withstands the Scotch-tape test. Packers and retailers can easily imprint prices or other data.

Water-based adhesives, labels and decals can be used on treated surfaces of coated paper, board and fabrics.

Equipment for the Kreidl Process is inexpensive and compact; it can be adapted to small or large scale operations. Detailed information on the process and ready-to-operate machines are available.

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Engerthstrasse 169, Vienna 2, Austria

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Plants and people

ton, Ind. The sales office is headed by John Kerr. Plant superintendent is Henry Klos.

Russell Gowans has been elected president of Crown Cork & Seal Co., Inc., Baltimore, Md. John J. Nagle will continue in the management of the firm as chairman of the board of directors. Charles E. McManus, Jr., vice president, has also been elected vice

chairman of the board of directors.

Robert J. Siebert is now Philadelphia district sales manager. He succeeds **Curtis L. Barnes**, who has been appointed a special representative on the staff of **Robert F. Duemler**, division vice president of sales.

Plans are nearing completion for the erection of Crown Cork's new can manufacturing plant in Baltimore, which is expected to be in operation in time for the 1955 packing season.

Continental Can Co., New York, has elected **Lawrence Wilkinson** as group vice president and **Charles B. Stauffacher** as vice president in charge of finance. Mr. Wilkinson will direct the fibre drum,



Lawrence Wilkinson **C. B. Stauffacher** **A. S. Redway**

paper container, flexible packaging and crown and cork divisions. **Raben C. Schenk** has been named acting control officer. **Albert S. Redway** has been appointed general manager Research and Development Department, Paper Container Division. Mr. Redway was formerly president of the American Paper Goods Co., Kensington, Conn., now being integrated as a part of Continental's Paper Container Division. Personnel of the research and development department, now at Van Wert, Ohio, will move to the Paper Container Division at Kensington.

James V. Scallan has joined the sales department of Continental's Bond Crown & Cork Division and will cover Michigan and northern Indiana, with headquarters

in Detroit. He replaced **G. Spencer Yull**, now assigned to Wilmington, Del. **James H. O'Neal** has also joined the division as contact for Coca-Cola bottlers in Ohio and Indiana.

Revere Copper & Brass, Inc., New York, has purchased substantially all assets of **Standard Rolling Mills, Inc.**, New York, manufacturer of aluminum foil products. The company will be known as the Standard Rolling Mills Division of Revere Copper & Brass. **Joseph H. Konigsberg**, president of Standard Rolling Mills, has been elected a vice president of Revere and will supervise the activities of the new division. Present personnel of Standard Rolling Mills will also be retained.



Joe Baxter, Jr. Black-Clawson Co., Fulton, N. Y., has established a new research and development department with **Joe Baxter, Jr.**, as director. The new department will coordinate activities and operate the company's laboratories at its Fulton and Middletown, Ohio, plants.

Robert Gair Co., Inc., New York, has acquired the properties, assets and business of **Harvey Container Corp.**, Plymouth, Mich., which will be operated as Gair's Harvey Container Division. **Charles U. Harvey**, president of Harvey Container, remains in charge of the Plymouth operation, and will also supervise other Gair container plants in the Middle West.

Hazel-Atlas Glass Co., Wheeling, W. Va., has appointed **Lucas B. Cochran** as New Orleans district sales manager to succeed **M. A. Carso**, who is retiring. **John W. Homburg** has been transferred from the company's St. Louis office to Wheeling. **John M. Duncan** has been made assistant district sales manager in New York.

Hazel-Atlas has opened a sales office in the Raymond-Commerce Bldg., Newark, N. J., with **Homer L. Bogert** as district sales manager.

Reynolds Metals Co., Louisville, Ky., has appointed **H. Norbert Kirchdorfer** as central regional sales manager. He replaces **Paul H. Fox**, who has been elected president of **Southern States Iron Roofing Co.**, subsidiary of Reynolds.

The Armstrong Cork Co., Lancaster, Pa., has assigned broadened responsibilities to **M. J. Warnock**, vice president, who will now coordinate and strengthen the company's public and employee relations activities, in addition to directing over-all financial affairs of the firm. **A. Hugh**

PLANNED PACKAGING

moves merchandise



Spectacular floor displays as well as compact colorful counter cartons do a better selling job for Rubbermaid Houseware as a result of the high quality paperboard and eye-catching design plus fine printing and processing which are nationally recognized features of our complete coordinated PLANNED PACKAGING facilities.



THE OHIO BOXBOARD CO.
RITTMAN, OHIO

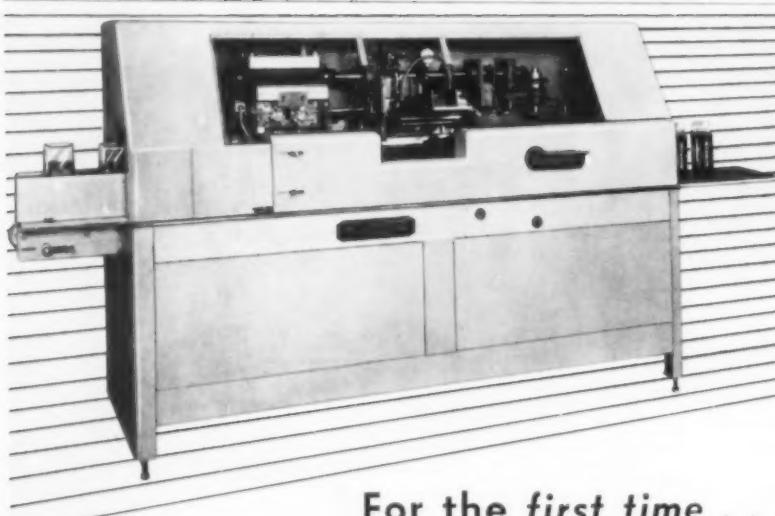
Manufacturers of paperboard, folding boxes, corrugated and fibre shipping containers, and converted specialties.

SALES OFFICES

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YOUNGSTOWN, O. • CINCINNATI, O. • TOLEDO, O.
MANSFIELD, O. • CANTON, O. • PHILADELPHIA, PA.
PITTSBURGH, PA. • ERIE, PA. • LOCKPORT, N. Y.
NEW YORK, N. Y. • CHICAGO, ILL. • DETROIT, MICH.

PLANTS

RITTMAN, O. • CLEVELAND, O. • CUYAHOGA FALLS, O.
NORWALK, O. • YOUNGSTOWN, O. • PITTSBURGH, PA.
SOUTH BEND, IND. • LOCKPORT, N. Y.



For the first time . . . a machine to close, seal and label cellophane bags automatically

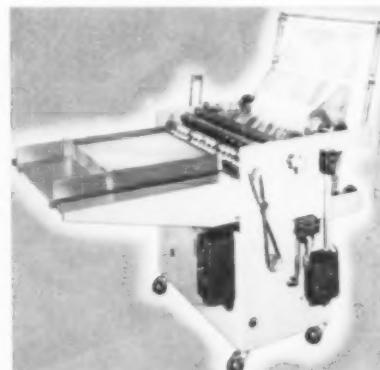
The new Peters Model L-2 Bag Sealing & Header Applying machine meets a long-time need for cellophane bag packagers. It receives filled bags from packing conveyor, automatically times them into the machine, tucks the gusset, applies header or label, and heat seals the bag and label—all at speeds of 65 or more bags per minute. Plain or thermo-plastic coated labels are handled; code or date applied to label if desired.

The model L-2 replaces expensive hand operation. It also assures uniform closure and accurate application of labels. It handles a wide range of products, and is readily adjustable to handle various size gusset type bags.

New Peters Cellophane Sheeter also Aids Cellophane Packagers

Peters new Model UD Cellophane Sheeting & Stacking machine automatically cuts cellophane and similar material to a wide variety of sizes. Then it stacks sheets for easy handling. Serves film and paper converters and wholesalers, as well as packagers of self-service meats, vegetables, fruit, etc.

For complete information and specifications on Peters packaging machines, write, wire or call



Peters MACHINERY COMPANY

4712 Ravenswood Avenue
Chicago 40, Illinois

Telephone: LONGbeach 1-9000

Plants and people

Forster will assist Mr. Warnock. Walter E. Hoadley, Jr., succeeds Mr. Warnock as company treasurer, and W. N. Hartman has been named assistant treasurer.

Vaughn L. Ritter has replaced Harry McDonald, retired, as manager of Armstrong's Dunkirk, Ind., glass plant. Other Dunkirk appointments include A. J. Diener, general superintendent; J. D. Mink, superintendent of primary operations; M. J. Urmon, superintendent of secondary operations.

Wood Conversion Co., St. Paul, Minn., has established three new industrial districts for its Tufflex products. The Eastern district in New York will be headed by Nick Apollonio; the Southern district, Atlanta, will be headed by H. W. Vollen-dorf; the Western district, St. Paul, will



be managed by R. E. Backstrom, who also serves as assistant industrial sales manager. W. E. Sacks has been made assistant manager of the Central district in Chicago.

C. L. Dostal has appointed Charles L. Dostal as general sales manager. Guy E. McCorison will continue as vice president in charge of sales.

Dean C. Mathews has been elected president and general manager of the Quality Park Box Co., subsidiary of Brown & Bigelow, St. Paul, Minn., manufacturer of set-up boxes, paper tubes and wrapping paper cores. Mr. Mathews succeeds George F. Jacobs.

John P. Eberhart has been made manager of the Pfaudler Sales Co., Portland, Ore. Pfaudler Sales represents the Pfaudler Co., Rochester, N. Y., in Idaho, Montana, Oregon, Utah, Washington and Wyoming.

Joseph J. O'Shaughnessy has been promoted to assistant sales manager for beverage industries in the Glass Container Division of Owens-Illinois Glass Co., Toledo, Ohio. John R. Brown has succeeded him as manager of the carbonated beverage division.

Kimble Glass Co. and Glasco Products Co., subsidiaries of Owens-Illinois, have combined their sales activities in the Pacific Coast area. Donald B. Briggs, formerly Glasco's Pacific Coast representative, has been named branch manager, with offices at Los Angeles. Assisting Mr.

Another
famous
product
"packaged
by
National"



Salada Tea's volume

has increased substantially since

National Folding Box recommended the present automatic packaging operation more than fifteen years ago. With only routine changes, the system has continued to function as efficiently as when it was first installed.

Whether your product calls for similar high-speed, automatic handling, or a special box or packaging system, National Folding Box is geared to provide quick, practical help.

Take advantage of National's facilities and diversified experience. Tell us your requirements. We'll carry on from there.

**NATIONAL
Folding Box
COMPANY, INC.**



SUBSIDIARY OF
FEDERAL PAPER BOARD COMPANY, INC.

SALES OFFICES: CHRYSLER BUILDING, NEW YORK 17, N.Y.; NEW HAVEN AND VERSAILLES, CONN.; BOGOTA, N.J.; BOSTON AND PALMER, MASS.; STEUBENVILLE, OHIO; PHILADELPHIA AND PITTSBURGH, PA.
FOLDING BOX PLANTS: BOGOTA, N.J.; NEW HAVEN AND VERSAILLES, CONN.; PALMER, MASS.; STEUBENVILLE, OHIO; PITTSBURGH, PA.
PAPER BOARD MILLS: BOGOTA, N.J.; NEW HAVEN, MONTVILLE AND VERSAILLES, CONN.; READING, PA.; STEUBENVILLE, OHIO; WHITE HALL, MD.

NEW WAY TO "NEEDLE" SALES...



Custom-designed packages, package components, novelties, sampling devices, etc., in clear, opaque and colored plastics.

Unprecedented sales action resulted from this new packaging idea produced by PLASTIC ARTISANS, INC. for The Risdon Manufacturing Co., Naugatuck, Conn.

Stapled to the card, the clear plastic container presents three sewing machine needles in a quality sales setting. Detached from the card the slide cover box adds extra value because it's a reusable dispenser hold-

ing each needle neatly in its own form-fitting groove.

If you're interested in giving your product the "deluxe" look that comes from plastic packaging, contact Plastic Artisans, Inc. They have the experience, creative know-how and specially designed, automatic, mass production equipment to give you quality results at the right price.

PLASTIC ARTISANS, INC.
70 Westchester Ave., White Plains, New York

PA-102

Plants and people

Briggs is Walter N. Hughes, former San Francisco branch manager for Kimble. Mr. Hughes will represent the northern West Coast area from headquarters in San Francisco.

Ekco Products Co., Chicago, has created a sales management staff for its Ekco-Foil Container Division. John B. Bowman



J. B.
Bowman



R. F.
Maloney



J. B.
Blane

is the staff sales manager. Raymond F. Maloney is assistant sales manager and Jack B. Blane is sales engineer.

The National Metal Edge Box Co., Philadelphia, has named Malcolm P. Junkin as senior vice president and James Eiseman as vice president. Charles Paist has been given responsibility for all sales functions.

Nox-Rust Chemical Corp., Chicago, will now be known as the Daubert Chemical Co., named after its president, George A. Daubert. Louis S. Mann has been appointed general sales manager of the company.

National Can Corp., Chicago, has appointed C. Carlton Colver as sales representative in Pennsylvania, with headquarters in Philadelphia.

Portco Corp., Vancouver, Wash., has completed a new addition to its specialty bag department, doubling production capacity. The enlarged facilities will produce packaging principally for western meat packers and furniture manufacturers.

John A. Reitz has been appointed Southeastern District sales manager of the Cryovac Div., Dewey & Almy Chemical Co., Cambridge, Mass., with headquarters in Atlanta. His territory covers Georgia, Alabama, Florida, East Tennessee, North and South Carolina.

Robert A. Miller has been named assistant manager at the Lockport, N. Y., plant of the Cryovac Division. Jack DeCaprio succeeds Mr. Miller as Midwestern manager for Cryovac sales.

The Oswego Falls-Sealright Corp., Fulton, N. Y., has promoted Harvey M. Mil-

TELE-SONIC Puts Air to Work
opening your bags... and
nothing costs less than air

1. Simple Thumb Motion Opens Bag
2. Simple Arm Motion Fills Bag
Bags with lip open automatically

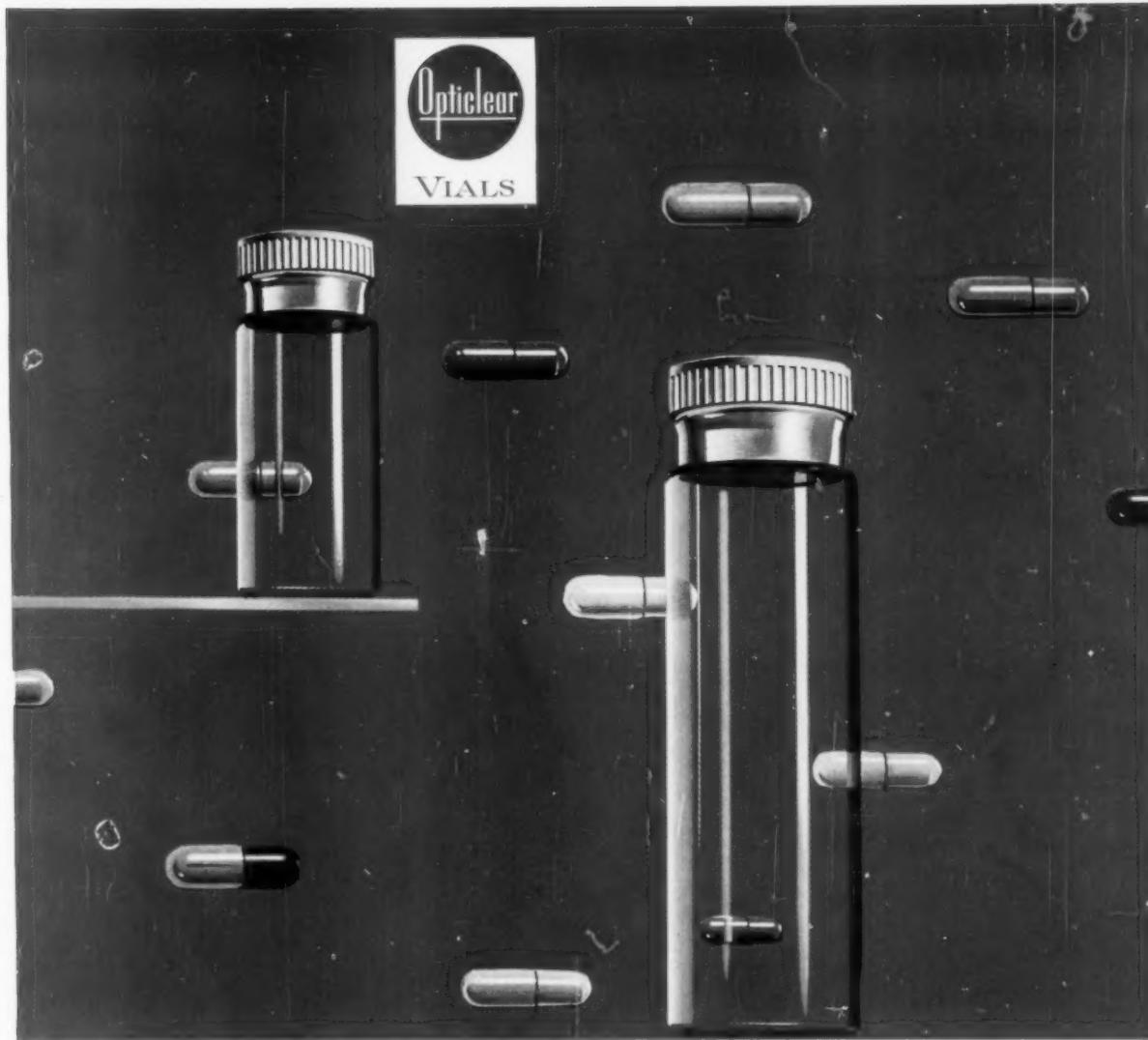
TELE-SONIC BAG OPENER Holds, Opens, Fills All Types Of Bags! Handles Polyethylene & Other Materials

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Put YOUR packaging operation on a stoppage-free, high efficiency, low-cost basis! Call or write today for a prompt personal demonstration. A sample bag and precise product dimensions will help determine the proper model for your product.

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SO CLEAR, THE CAPSULES SEEM TO FLOAT IN SPACE



Kimble Opticlear Vials are made of such extremely clear glass that their contents virtually seem to float in space. That is part of the classic beauty of these vials especially designed for fine prescriptions and fine pharmaceutical products.

Adding to their efficiency in repel-

ling moisture that sneaks through the sidewalls and bottoms of some types of containers, is a moisture-proof closure especially engineered for Kimble Opticlears, that is moisture-proof beyond anything else in the market.

Opticlears' easy-in and easy-out closures, clear and sparkling glass have helped make outstanding sales

successes for a broad and varied assortment of pharmaceutical and proprietary tablets and capsules, fancy food items, spices and advertising novelties.

★ ★ ★

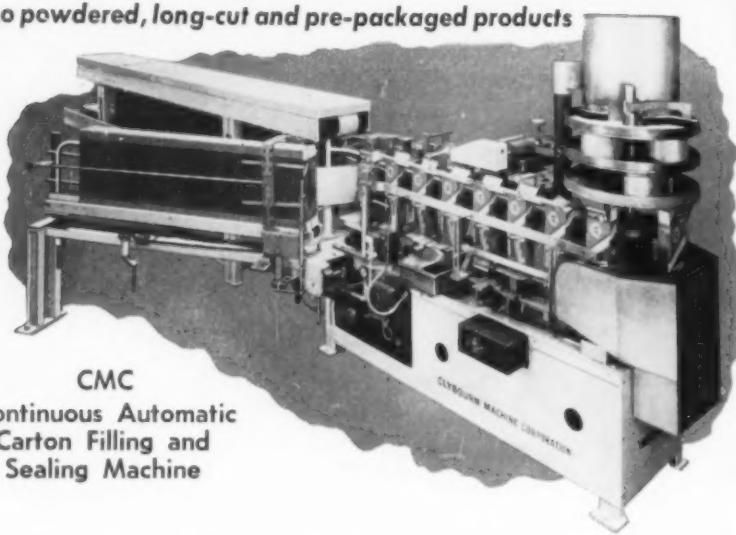
Kimble Opticlear Vials are only one of many Owens-Illinois contributions of engineered glass products to the nation.

KIMBLE OPTICLEAR VIALS
AN  PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO

The WORLD'S BIGGEST VALUE for Packaging Granular Products

Also powdered, long-cut and pre-packaged products



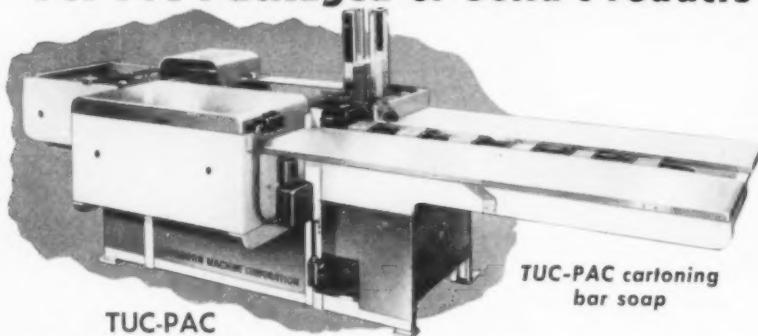
CMC
Continuous Automatic
Carton Filling and
Sealing Machine

Automatic carton filling and sealing • Accurate measure by volume, net weight or auger feed • Automatic shake-down vibrator • Quick adjustment for a great range of carton sizes • Minimum floor space—only 17'10" by 2'2" • Designed right • built right • priced right

Just send for Bulletin 20 and compare features, design, construction, operation, size and price; you'll see why alert buyers (names of

users on request) the country over choose CMC for packaging granular products, powders, bagged products, macaroni and spaghetti.

For Pre-Packaged or Solid Products



TUC-PAC
Continuous Loading
and Cartoning
Machine

Write for Bulletin 20.

Automatically cartons powdered milk, bar soap, candy bars, ice cream bars and many other solid or pre-packaged products.

Forms, loads and closes the cartons automatically. Attendants merely fill the conveyer pockets.

Models for straight or reverse tuck or glue end cartons.

CLYBURN MACHINE CORPORATION
6479 N. Avondale Ave., Chicago 31, Ill.

Plants and people

lier, Jr., to assistant district manager of the company's Philadelphia, eastern Pennsylvania, southern New Jersey district. Mr. Millier is succeeded as Sealright central New York representative by Robert G. Chetney.

Lewis S. Lawson has formed the new Lawson Chemical Products Co., 5634 Selmaraine Dr., Culver City, Tex. The plant houses special aerosol packaging equipment designed by Mr. Lawson. The company will assist manufacturers in developing aerosol packaging for their products.



M. V. Girkins has been appointed as consultant for the butter packaging programs of Sutherland Paper Co., Kalamazoo, Mich. Mr. Girkins recently retired as sales manager for the Lynch Corp.

David Shopkorn has joined the sales staff of Harte & Co., Inc., New York, and will handle the company's line of vinyl film and sheeting and polyethylene.

The Cleveland Div., Hubbs & Howe Co., Buffalo, N. Y., has been sold to a group of associates. The new company, to be known as the Gascon Paper Co., is headed by Martin D. Gascon, former first vice president of Hubbs & Howe. The change in ownership allows Gascon Paper Co. to expand its efforts in Ohio while Hubbs & Howe will continue to serve an area with a westerly boundary in eastern Ohio, throughout western Pennsylvania and all of New York State west of New York City.



M. A. Grogel has been appointed product development manager of the Products Div. to head the new food packaging research and development in rigid foil containers.

Philip L. Ruppenthal has been appointed to the southern Florida sales staff of Milprint, Inc., Milwaukee, Wis.

Rhinelander Paper Co., Rhinelander, Wis., and Weyerhaeuser Timber Co. have organized the R-W Paper Co. The new firm will construct a paper mill at Longview, Wash., for the manufacture of glassine and greaseproof papers. The mill, to be completed in 1956, will serve the Pacific area. Officers of the R-W Paper



New York 17, N. Y.
50 E. 42nd St.

Chicago 4, Ill.
80 E. Jackson Blvd.

Memphis 2, Tenn.
Wurzburg Bros.

Los Angeles 48, Calif.
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Collapsible Metal Tubes • Lacquer Linings • Wax Linings • Westite Closures • Soft Metal Tubing • Household Can Spouts • Applicator Pipes • Compression-Injection Molding

Some Got It... Some Ain't

If you dream of having your product asked for by name, you have lots of company. But brand loyalty, like love, is fickle. And it can't thrive unless your package has plenty of built-in impulse-buying appeal. For today, the product package is the main selling agent. But package shapes and sizes tend toward standardization.

The Key Factor—One package stands out from others in its class largely because of the way it's sealed and labeled. That's why this phase of your planning deserves your best effort. For to what avail is the time, labor and money lavished on research, quality controls, advertising, dealer aids and brand promotion, if, at the critical moment your competitor's label stimulates the impulse that steals the sale?

Impulse Impact—To improve, or even hold a competitive brand position in today's market, your label must meet many exacting requirements . . . the most skillful use of design, color, copy, typography, and the advice of label specialists. That's where we can help. For Ever Ready Labels lure, urge, tell, sell . . . stir all the human emotions . . . at a remarkably low cost per stir. **Applications**—Right now, we're helping firms in your field develop special labels for specific tasks: brand building, price changes, special offers, approval seals, etc. And Ever Ready Labels can help you sway buyers at the moment of decision by telegraphing the full value of your product, the integrity of its maker, how useful it is, how well it is made, why it is better.

Informative Literature—If you seek low-cost assurance of merchandising success, send for this *Free* material: 1. 'Developing a Label with Impulse Impact' . . . a check list of major factors influencing impulse-buying appeal. 2. 'Ever Ready Ideas at Work' . . . 24 pgs. packed with sensible ways of saving time, labor and money in *every* phase of your business. 3. Our library of case histories and samples of Ever Ready Labels for every surface, purpose and product are at your disposal. And our staff of label consultants . . . ever ready to help you and your agency develop a planned labeling program.

Packaging Div., Ever Ready Label, 117B East 30th St., New York 15, N. Y., MURray Hill 6-1220. Plant: Belleville 7, N. J., WHitehall 3-5454.

Plants and people

Co. are: Folke Becker, president; W. P. Gullander, vice president and treasurer; George S. Long, Jr., secretary; and Ruth Neumann, assistant secretary. Directors include Folke Becker, B. R. Cancell, R. F. Nelson, J. P. Weyerhaeuser, Jr., Charles H. Ingram and Howard W. Morgan.

E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., has appointed **Armstrong Cork Co.** as sole distributor of its "Cel-O-Seal" cellulose bands on the West Coast. Armstrong takes over the West Coast distributorship from I. F. Schnier Co., whose contract has expired.



W. C.
Smith

William C. Smith has been appointed sales manager of the Lamcote Div. of the **Arvey Corp.**, Chicago. Allen H. Stone has been made plant manager of the Lamcote Packaging Division.

An additional California sales representative, **I. F. Schnier Co., Inc.**, 683 Bryant St., San Francisco, has been appointed by the Sylvania Div., **American Viscose Corp.**, to sell Sylvania bands. King & Anderson, San Francisco, distributor for the past seven years, continues as Sylvania's representative.

S. T. Edgerton has joined the firm of **Coy, Hunt & Co.**, New York, as a consultant.

Chester M. MacChesney, chairman of the executive committee of **Acme Steel Co.**, Chicago, has retired after 38 years of service with the firm.

Albert B. Anderson has been appointed sales representative for the Steel Strapping Div. of **The Stanley Works**, New Britain, Conn.

Dumont Enterprises, Inc., Englewood, N. J., has appointed Robert L. MacKenzie as treasurer.

George T. West has been named New England manager of **General Printing Ink Co.**, Div. of **Sun Chemical Corp.**, Long Island City, N. Y.

Stocker Mfg. Co., Netcong, N. J., has opened an office at 6815 W. 77 St., Overland Park, Kan., headed by Ken Hendrick.

The American Box Co., Cleveland, Ohio, plans to expand its facilities and begin corrugated container production at its

MODERN PACKAGING REPRINTS

Helpful information for solving today's packaging problems.

- F & DA Acceptance Criteria** . . . 25c
- Tensile Strength in Waxes** . . . 15c
- Strip Coating For Cheese** . . . 10c
- Sorbic Acid As a Mold Inhibitor** 10c
- Silicones in Packaging** . . . 15c
- Shock Mounting Systems** . . . 15c
- Saran Film Today** . . . 20c
- Polyethylene as a Food Film** . . . 20c
- Polyethylene Carboys** . . . 15c
- Piggy-back Cans** . . . 10c
- Measuring the Stiffness of Paper** 15c
- In-plant Labeling** . . . 10c
- Gas Permeability of Films** . . . 20c
- Flexible Vinyl Tube** . . . 15c
- Film Wrapped Lemons** . . . 10c
- Efficient Carton Stitching** . . . 10c
- Design Factors in Bow-Molded Plastic Bottles** . . . 20c
- Desiccants For Drugs** . . . 15c
- Decals Automatically Applied** . . . 10c
- Convenience Devices** . . . 15c
- Case Packer For Milk In Fibre** 10c
- Branded Industrial Wraps** . . . 10c

Please enclose cash with order. Send to Industrial Magazine Service, Inc., 575 Madison Avenue, New York 22, New York



King-size Profits!

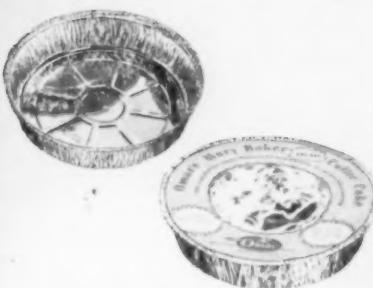
Sell More, Make More Money with Gleaming Bright EKCO-FOIL CONTAINER-PACKAGES!

Here are just eight of the 105 shapes and sizes of EKCO-FOIL Container-Packages that we have in stock and can ship you immediately! Your product needs *Display Attention* and *Quality Protection*. Every product for which an Ekco-Foil Container-Package has been designed is earning increased sales and profits!



Perfect for mixed nuts! Also being used to package fresh salads, chili con carne, and even starter plants! Ekco-Foil fills a wide variety of food packaging needs.

Chocolate candies score sales records in this pan! Also fried fish fillets, brownie mix, and barbecued beef dinners. It may be just what your product needs.

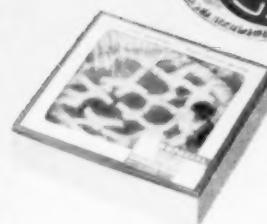


Creates king-size coffee cake sales! Gives greater eye and flavor appeal to rolls, candies, frozen hors d'oeuvres and many others!

For ready-to-serve meats or casseroles! Use this gleaming dish for frozen pies and fruit pies, too! No hard-to-clean dishes to wash! No casserole investments and breakage!



Sells cheese cake mix faster! Just right, too, for bakery specialties, carry-out meals and other foods. In three sizes. Vertical, flange, or curled rim.

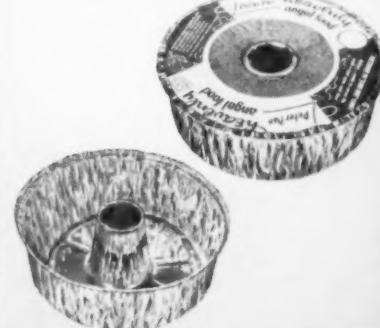


In many different sizes! Special sizes available on order. Curled rim. Try just one bakery item in it—watch the better baking, faster sales results!



Cakes of All Kinds taste and look best in this Ekco-Foil pan. No transferring from pan, no handling losses. In plain or green and red Ekco-Foil for Christmas cakes. Ideal for cookies and candies, too.

Another one of 105 Ekco-Foil container-packages that add eye appeal and buy appeal to your baked product. Available with vertical flange for use with covers or curled rim construction.



Send Us Your Package!

Let Ekco packaging engineers examine it and make recommendations that can increase your profits! Process and sell in Ekco-Foil—the new package-container that makes other packaging old-fashioned by comparison! Call your Ekco salesman or distributor today!



EKCO-FOIL CONTAINER DIVISION

Ekco Products Co., Chicago 39, Illinois. Also available from Ekco Products Company (Canada) Ltd., Toronto



When it's WET-STRENGTH you want— Patapar has it!

A heavy weight pulled up and down in boiling water is one way to show the incredible wet-strength of Patapar Vegetable Parchment. Patapar won't weaken. It comes through glistening and strong.

Resists grease, too

The high wet-strength of Patapar plus its high resistance to grease or oil penetration has been the answer to many kinds of packaging and other problems — just as it may be helpful to you.

MANY DIFFERENT TYPES — Patapar is produced in hundreds of types for a variety of applications. As a packaging material it has set high standards of protection for foods like butter, poultry, margarine, ham, bacon, cheese, sausage, ice cream. Special types are used as a release lining for tacky substances, dialyzing membranes, release backing for polyester film, translucent master sheets for direct print copy machines.

Patapar is available in sheets or rolls — plain or colorfully printed.

SEND FOR SAMPLES — Tell us the application you have in mind and we will send samples of the type of Patapar we recommend. Write today.

**PATERSON PARCHMENT
PAPER COMPANY**
Bristol, Pennsylvania
West Coast Plant:
310 Bryant Street, San Francisco 7
Sales Offices: New York, Chicago

HEADQUARTERS FOR VEGETABLE PARCHMENT SINCE 1885

Patapar
Vegetable Parchment
HI WET STRENGTH • GREASE-RESISTING

Plants and people

main plant. The new corrugated operation is expected to be producing at full capacity early this year.

H. Clinton Atterbury has been elected executive vice president of the **Atlantic Carton Corp.**, Norwich, Conn. **William B. Kingsland** and **Edward C. Herber** were elected vice presidents. **Walter E. Turner**, president and treasurer, who is semi-retired, continues in an advisory capacity.

Gilbert Banever & Associates, package designers, have opened new offices at 101 Park Ave., New York 17.

Herbert S. Spencer has retired as advertising director of **Durez Plastics & Chemicals, Inc.**, North Tonawanda, N. Y. However, he will continue to handle several accounts as advertising and sales consultant. **Clark R. Simmons**, who has served the company as assistant manager of advertising, succeeds Mr. Spencer.

G. T. Henderson has been appointed Detroit district sales manager for **The Hinde & Dauch Paper Co.**, Sandusky, Ohio.

W. H. Barrows, Boston, has been appointed New England district manager for **Arkell & Smiths**, Canajoharie, N. Y., bag manufacturer.

Bensing Bros. & Deeney, Philadelphia, has appointed **Joseph T. Woods** as manager and vice president in charge of production of the company's new flexographic ink-making plant in San Leandro, Calif. Other West Coast appointments include **Edward J. Dougherty**, vice president in charge of sales, and **Kenneth Nelson**, sales-service representative in the southern part of the territory.



H. M. Meyers has been appointed director of the art department of the **Atlanta Paper Co.**, Atlanta, Ga.

Edwin C. Evans has been made vice president and assistant general manager of **Behr-Manning Corp.**, Troy, N. Y. **William I. Clark, Jr.**, company secretary, is now also assistant to the president.

W. C. Embry, vice president and director of the **General Box Co.**, Des Plaines, Ill.,



Less than 306 planning days till CHRISTMAS*

Call Your Milprint Man—First!

* If you don't work on Sunday



24-Can Overwrap



Die-cut Carton



Carton



Holiday Band



Greeting Card



Sleeves & Cartons



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PACKAGING MATERIALS
LITHOGRAPHY & PRINTING

General Offices, Milwaukee, Wisconsin
Sales Offices in Principal Cities

*This insert printed by Milprint, Inc. *Reg. U.S. Pat. Off.*

Printed Cellophane, Pliofilm, Polyethylene, Saran, Acetate, Glassine, Foils,
Folding Cartons, Bags, Lithographed Displays, Printed Promotional Material.

TOUGH PACKAGING PROBLEM?



Don't Overlook
the Advantages
of

NIEMAND BROS. TUBULAR PAPER PACKAGING

Distinctive . . . Rugged . . . Economical! No wonder more and more progressive merchandisers switch to TUBULAR PAPER PACKAGING. Need a "glamour" package . . . a "protector" package . . . or both? NIEMAND BROS. have the answer.

Plain or Printed • Decorative Papers
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Illustrated literature showing
many interesting tubular
package applications, avail-
able on request.

A Niemand Bros.
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DEPENDABILITY

For more than sixty years, folks have been saying, "You can DEPEND on that Brooks and Porter outfit to meet their promises, every time."

And as for ABILITY many of the most successful sales promotion managers in the United States have learned that it pays to lean heavily on our creative and productive talent.

Reserve YOUR seat on the gravy train—Call ALgonquin 5-4848 immediately.

BROOKS and PORTER

PACKAGING AND DISPLAYS

304 HUDSON STREET • NEW YORK 13

Plants and people

has been assigned the responsibilities of planning activities of the company in the corrugated container field. In order to free Mr. Embry for the assignment, O. D. Lloyd, former sales manager of the Louisville corrugated box plant, has charge of sales and production at Louisville.

Central States Paper & Bag Co., St. Louis, Mo., has opened a new plant in Palatka, Fla., to supply the Southeastern and Eastern states.

Walter Beanblossom has joined the H. B. Fuller Co., St. Paul, Minn., as technical director of its Buffalo, N. Y., plant. Frederick A. Hipp has been appointed Fuller representative in the Buffalo area.

Chase Bag Co., Chicago, has appointed A. Wellford Garrett to its Industrial Engineering Department, St. Louis.

The N. T. Gates Co., Philadelphia, designer and supplier of packaging materials, has moved to its own recently completed building at 6845 Westfield Ave., Camden, N. J.

The David Weber Co., Philadelphia, manufacturer of corrugated shipping containers, has completed an extensive expansion program. The plant can now produce in excess of 10 million square feet of corrugated board a week.

The Borden Co.'s Chemical Div., New York, has appointed J. Spencer Brown, III, as advertising manager.

Chester Packaging Products Corp., Yonkers, N. Y., has appointed Vincent W. Castellano as sales representative for polyethylene film in the New York area.

Swift & Co., Chicago, has opened a new adhesive plant located in Dallas, Tex., under the management of W. C. Loeffel.

Edward R. Hankins, 72, founder of the Hankins Container Co., Cleveland, and chairman of the company's executive committee, died on Dec. 19. Mr. Hankins had been active in fibreboard and fibre box industry affairs for many years.

Fred J. Wood, vice president of the Crown Cork & Seal Co., Inc., Baltimore, Md., died on Sunday, Dec. 19, at the age of 45. Mr. Wood was general manager of the company's Crown & Closure Division.

George A. Reach, one of the founders of the Crescent Box Corp., Philadelphia, died on Dec. 7 at the age of 86.



PACKAGE OPENS MARKET!

Olin Cellophane Tra-Pak Helps HEKMAN RUSK Co. Win Quick Distribution for New Cookie Assortment

When the Hekman Rusk Co. of Holland, Michigan recently introduced a new cookie assortment, company executives worked out packaging construction and features with the aid of sample trays from an Olin Cellophane Tra-Pak kit. For better *sight sampling* of their cookies, they decided on the tray overwrapped in Olin Cellophane shown above.

The results: instead of the usual slow growth of demand, orders were soon running ahead of production. In a matter of months, distributors as far away as Texas were asking for the delicious cookies that sold themselves on sight!

If any of your products need a quick sales boost, by all means try a tray package overwrapped in Olin Cellophane. The results can be amazing — and your packaging costs may be cut as much as 40%.

Write today for a free Olin Cellophane Tra-Pak... the handy kit that helps you work out quickly what type of tray construction best fits the needs of your own product.



FREE OLIN CELLOPHANE TRA-PAK

Yours on request — 8 sample trays to help you develop quickly the type of tray design that best fits the self-service packaging requirements for food, candy, drug and other consumer products.



A Packaging Decision Can Change the Course of a Business

OLIN FILM DIVISION • 655 MADISON AVENUE • NEW YORK 21, N.Y.

FEBRUARY 1955

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For your information

Formation of the **Collapsible Tube Mfrs. Council**, representing all 16 of the producers of these metal containers, has been announced. Members are **Aluminum Co. of America**, **Art Tube Co.**, **Atlantic Mfg. Co.**, **Atlas Collapsible Tube Co.**, **Globe Collapsible Tube Corp.**, **Michigan Collapsible Tube Co.**, **National Collapsible Tube Co.**, **Peerless Tube Co.**, **Sheffield Tube Corp.**, **Standard Collapsible Tube Co.**, **Sun Tube Corp.**, **J. S. Turner White Metal Co.**, **Victor Metal Products Co.**, **Wheeling Stamping Co.**, **White Metal Mfg. Co.**, and **A. H. Wirz, Inc.** Primary aim of the council is to unite the thinking and energies of the industry in promoting the packaging role played by collapsible metal tubes, according to **Mark W. Dresden**.



**M. W.
Dresden**

of Wirz, who has been elected chairman of the council. Serving with Mr. Dresden are **Frederic Remington** of Peerless, **C. Christy Jones** of Alcoa, **Charles Stiassni** of White Metal, **Victor Muscat** of Victor Products, **J. H. Heideger** of Standard Collapsible, **Kenneth M. Leghorn** of Sun, and **A. W. Paull, Jr.**, of Wheeling Stamping.

The **Folding Paper Box Assn. of America** now has available for distribution a revised edition of its industry manual, "The Folding Carton." Featuring a four-color cover and profusely illustrated, the booklet consists of 56 pages on the history and manufacturing of the folding paper carton. Copies are available at 75 cents for members and \$1.25 for non-members on request to the FPBAA, 337 W. Madison St., Chicago 6.

Entries in the **5th Annual Lithographic Awards Competition and Exhibit** are now being accepted by the **Lithographers National Assn.**, sponsor of the event. The announcement brochure, designed by **Norman Perman**, contains the rules and regulations of the competition, in which the finest specimens of lithography produced in 1954 will be judged by a panel of experts from the lithography, art and advertising fields. Closing date for entries is March 1. Major classifications in the competition include packaging and point-of-purchase displays. The 4th Awards Catalog, to be designed also by Mr. Perman, will illustrate the prize-winning selections and will be mailed to 30,000 firms and distributed at the opening exhibit in Chicago, the LNA Convention at Lake Placid, N. Y., June 20-23, and at local exhibitions in several cities. An-

nouncement brochures and entry blanks may be obtained by writing to the Lithographers National Assn., 420 Lexington Ave., New York 17, or LNA's Western office, 127 N. Dearborn St., Chicago 2.

The promotional and publicity program inaugurated last year by **The Society of the Plastics Industry, Inc.**, on vinyl film quality standard will be vigorously continued in 1955, according to **J. R. Price** of the Bakelite Co., chairman of the society's Vinyl Film Standards Educational Committee. He pointed out the success of the program thus far and stated the program this year will be aimed at the consumer.

The **American Management Assn.**'s annual marketing conference was held at the Hotel Statler, New York, Feb. 7-9. One of the highlights of the meeting was a panel discussion by four company presidents on the standard of planning and performance they expect from the sales department in the light of today's market. Some 25 speakers, panelists and chairmen participated in the sessions. The A.M.A. Marketing Conference exhibit was on display throughout the conference.

The 10th anniversary of the founding of the **Society of Industrial Designers** has been marked by the publication of a book titled "Industrial Design in America, 1954" (Farrar, Straus & Young, Inc., 101 Fifth Ave., New York 3; \$12.50). The book presents a picture and text survey of the newest and best in design in a cross-section of American industry as compiled by the 153 members of the society. It is recommended as a source of ideas, methods and materials for executives and development people and as a basic reference book. The cloth-bound volume contains 224 pages, 450 black-and-white and 24 color illustrations.

The third **Dutch Packaging Show**, dealing exclusively with packaging materials and machinery, will be held May 10-17 in the R. A. I. Buildings in Amsterdam, Holland. Exhibitors and visitors from all over the world are expected to attend.

The **Packaging Machinery Mfrs. Institute** has published a new leather-covered, loose-leaf directory covering makers of all types of packaging machinery. The book is designed as a ready reference for purchasing agents, factory superintendents and others interested in this type of equipment. The directory is divided in three sections: one section lists the trade names of equipment and the names of manufacturers; another lists the kind of equipment available and the names of the

manufacturers; the third section, alphabetically arranged, gives names and addresses of the machinery makers and complete information on the machines that each makes. Copies, priced at \$10 each, are available from **PMMI**, 342 Madison Ave., New York 17.

The **Packaging Machinery Mfrs. Institute**'s spring meeting, to be held April 16-17 at the Palmer House, Chicago, will be chaired by **John P. Corley** of Miller Wrapping & Sealing Machine Co. Members of the program committee will include: **Charles L. Barr** of F. B. Redington Co., **H. Lyle Green** of Peters Machinery Co. and **I. H. Risser** of U. S. Bottlers Machinery Co.

Clarence I. Lee of the **Hampton Mfg. Co.** has been elected president of the **Pressure Sensitive Tape Council**.

An informative booklet entitled "ABC's of Canning Soft Drinks" tells the complete story of the can as a container for soft-drink beverages. Published by the **Continental Can Co.**, copies are available

What's doing

- Feb. 14-16—**American Management Assn.**, Personnel Conference, Palmer House, Chicago.
- Feb. 15—**Packaging Assn. of Canada**, Technical Institute, Second National Forum, Royal York Hotel, Toronto, Ont.
- Feb. 15-18—**National-American Wholesale Grocers' Assn.**, Chicago.
- Feb. 19-23—**National Canners Assn.**, 48th annual convention and exhibition, Conrad Hilton Hotel, Chicago.
- Feb. 19-23—**National Food Brokers' Assn.**, Chicago.
- Feb. 21-24—**Technical Assn. of the Pulp & Paper Industry**, annual convention, Hotel Commodore, New York.
- Feb. 21-24—**American Paper & Pulp Assn.**, annual meeting, Waldorf Astoria, New York.
- Feb. 21-25—**New York Gift Show**, Hotels Statler and New Yorker, New York.
- Feb. 21-27—**International Food Show**, Kingsbridge Armory, New York.
- Mar. 3—**Packaging Assn. of Canada**, Eighth Quebec Regional Conference, Sheraton-Mt. Royal Hotel, Montreal, Que.

THE *Aerosol Valve* FOR YOUR PRODUCT by Precision



NOW... Precision's same high quality, time-tested aerosol valve is being manufactured in England, France, Germany, Italy and Brazil. The availability of the Precision Valve throughout the world now permits your foreign sales to enjoy the same aerosol growth and success that has been experienced in this country. So wide-spread has been the public acceptance and demand for self-dispensing packages, that new type products and additional brands are added daily to the long list. Now is the time for you to investigate this market.

Why is Precision the Leader?

DESIGN . . . The wide range of Precision Valves featuring positive, fingertip operation assures a successful solution to your specific spray requirements.

CONTAINER . . . Precision has a valve engineered for the aerosol container of your choice plus the widest selection of plastic colors to enhance the beauty of your package.

PRODUCT . . . Plastic construction eliminates corrosion enabling Precision Valves to perform efficiently for all products whether foam, residual or true aerosol.

FILLING METHOD . . . All types of aerosol products with Precision Valves, are being filled successfully by pressure

as well as refrigeration at the lowest possible cost.

QUALITY . . . Precision's basic research, production skill, development techniques, 100% inspection of every valve *plus* the background of over 150,000,000 time-tested valves is your assurance of quality.

ECONOMY . . . The highest plant production efficiency, as well as the lowest rejection rates for filled containers, assures maximum economy with Precision Valves.

AVAILABILITY . . . The world's largest aerosol valve manufacturing facilities, are combined with the latest production methods and techniques, to give prompt production and delivery schedules.



• We invite your inquiry to enable our staff of aerosol valve technicians to work cooperatively in satisfying your valve requirements.



Precision Valve Corporation

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YOU CAN TELL A HAYSSEN-WRAPPED PACKAGE BY THE WRAPPING IT KEEPS!

**easy,
automatic
operation**

Regardless of size or shape, you get a neat, tight wrap on every package with a Hayssen automatic wrapping machine. *Wrapping's easier!* Also, production men report savings up to 80% over previous wrapping costs.

**simple
to
adjust**

No complicated adjustments from size-to-size on a Hayssen. No gears or sprockets to remove or change... no need for expensive mechanics to change size, either. So simple the operator does it on the job.

**more
sturdily
built**

Hayssen's simple, rugged design, using fewer moving parts, keeps these machines working and saving through years of dependable, trouble-free service. Every moving part is in the open and easily reached for maintenance and cleaning.



Since 1910, manufacturers exclusively of automatic wrapping machines for textiles, paper, frozen foods, meats, vegetables, and many other products. Whatever your product, Hayssen can solve your wrapping problem. **WRITE** today for more information.

Hayssen mfg. company
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Atlanta • Boston • Chicago • Dallas • Denver • Detroit • Los Angeles • Minneapolis
New York • Philadelphia • St. Louis • San Francisco • Seattle • Montreal • Toronto

For your information

from Chris Buckley, Continental Can Co., 100 E. 42 St., New York 17.

A fund of \$291,000 for grants to universities and colleges to help improve the teaching of science and mathematics has been announced by E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., as part of its \$800,000 aid-to-education program for 1955-56. This is now the largest single part of the company's aid-to-education program, which for many years has also provided grants for fundamental research and postgraduate fellowships. The enlarged program will assist more than 100 institutions next year.

At the annual meeting of the National Flexible Packaging Assn. in New York, the Bureau of the Census was authorized to set up and operate a monthly sales-volume report, starting with January, 1955, to provide current statistics on the volume of converted flexible packaging materials and to indicate the relative importance of major end uses and markets. The proposed form is divided into three sections: Section I covers bags, pouches and tubing made of cellophane, polyethylene, acetate and other plastics and glassine; Section II covers printed rolls and sheets made of the same raw materials; and Section III covers laminated and coated structures.

"The 33rd Annual of Advertising and Editorial Art and Design" (Farrar, Straus & Young, Inc., 101 Fifth Ave., New York 3; \$12.50) is now available. The book, published by the Art Directors Club of New York, records the 423 exhibits from the 33rd National Exhibition of Advertising and Editorial Art and Design.

The Glassine & Greaseproof Mfrs. Assn. will again offer free consultation in packaging problems as a part of its exhibit at the 24th National Packaging Exposition to be held in Chicago, April 18-21.

The Organization for European Economic Co-Operation, Pulp and Paper Committee, has published in booklet form the results of its survey to ascertain the opportunities open to the European paper industry for earning or saving dollars, the prospects of expanding production and the obstacles which might hinder such expansion. The booklet, titled "The Pulp and Paper Industry in Europe—Development and Prospects," is available at \$1.50 per copy, from the O.E.E.C. Mission, Publications Office, 2002 P St., N.W., Washington 6, D. C.

USI TO MARKET

"PETROTHENE"** — polyethylene resins will be available in April from the new unit now being constructed by National Petro-Chemicals Corporation at Tuscola, Illinois. This completely integrated operation starts with natural gas as the source of ethane which is converted into ethylene in the world's largest petrochemical plant.

polyethylene

FROM PETRO

"PETROTHENE" will be available in all quantities from fifty pound bag to carload through the nation-wide sales facilities of U. S. Industrial Chemicals Co. and will be warehoused at strategic locations for prompt delivery to processors. "PETROTHENE" will be available in grades specifically designed for use in film, bottles, pipe and injection molding. A new booklet on "PETROTHENE" will be available shortly.

*Application has been filed in the U. S. Patent Office for registration of "PETROTHENE" as the Trade Mark for polyethylene resins produced by National Petro-Chemicals Corporation, a joint enterprise of National Distillers Products Corporation and the Panhandle Eastern Pipeline Company.



U.S.I. INDUSTRIAL CHEMICALS CO.

Division of National Distillers Products Corporation
99 Park Avenue, New York 16, N. Y. Branches in principal cities

U. S. patents digest

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps not accepted. Edited by H. A. Levey

Apparatus for Nicking the Edge of the Web Passing Through a Wrapping Machine, J. W. Smith (to Battle Creek Packaging Machines, Inc.). U.S. 2,694,964, Nov. 23. In combination with a wrapping machine having means for advancing a web of wrapping material therethrough and other means for attaching a rip strip to spaced portions of said web, a cross head extending transversely of said web and having a pressure plate disposed on the opposite side of said web from the line of attachment of the strip to said sheet.

Container-Forming Machine, J. G. Vergobbi (to Pneumatic Scale Corp., Ltd., Quincy, Mass.). U.S. 2,694,965, Nov. 23. In a container-forming machine having in combination a plurality of expandable mandrels, bag-forming means comprising means for continuously advancing a web of bag-forming material, means for folding and discontinuous means for transversely sealing the continuously moving web to form a strip of connected bag section having an unsealed portion forming a vent.

Machine for Dispensing Tape, A. P. Krueger (to Derby Sealers, Inc., Derby, Conn.). U.S. 2,695,057 and 2,695,058, Nov. 23. A machine for dispensing pressure-sensitive tape from a supply roll, said machine comprising a frame, a carrier member movably mounted on the frame, a rotatable tape-feeding member mounted on said carrier to which the tacky side of the tape adheres and a severing member on the frame with means for rotating said feeding member while holding said carrier against movement to dispense tape from the supply roll.

Dispensing Closure for Receptacles, W. Voss, New York, N. Y. U.S. 2,695,111, Nov. 23. A closure for receptacles comprising a closure cap portion for neck portion of the receptacles, one of said portions having a plurality of bayonet-shaped slots and the other portion having a plurality of projecting pins, one for each slot, each slot having an open end and a closed end with a straight part intermediate and connected to the two ends to form a groove.

Compartmented Container, P. E. Wells, Newport News, Va. U.S. 2,695,114, Nov. 23. A compartmented container comprising a relatively shallow receptacle having a circular bottom, a circular-cylindrical side wall carried by the bottom and extending upward therefrom adjacent the periphery thereof, a tongue carried by the convex side of the circular-cylindrical side wall and projecting outwardly therefrom intermediate the upper and lower edges thereof.

Food Container, N. W. Roop (to Columbus Plastic Products, Inc., Columbus, Ohio). U.S. 2,695,115, Nov. 23. A frozen-food receptacle of molded-plastic composition comprising an open-top receptacle body of generally rectangular cross section having inwardly and downwardly tapering side walls defining along their upper edges an open-mouth rim and a generally flat rectangular bottom wall.

Collapsible Tube Cap, C. B. Kishpaugh and R. C. Bennett, Sr., Hendersonville, N. S. U.S. 2,695,119, Nov. 23. A cap for removable mounting on the threaded neck of a collapsible tube comprising an inner cap having internal threads for engagement with the threads of said neck, an outer cap member having a skirt telescopically fitting over the cylindrical side wall of inner cap member, said inner cap including an outer wall having a plurality of discharge ports communicating neck with the interior of outer cap.

Can-Capping Machine, R. J. Mulligan (to Johnson & Johnson, a corporation of New Jersey). U.S. 2,695,124, Nov. 23. In or for a can-capping machine, a capping unit comprising, in combination, a hydraulically operated ram, a cap holder mounted on lower end of ram, which locates the cap in approximate alignment with the can to be capped, a sectional chuck, which is also mounted on the ram which encompasses the cap holder, and a presser head likewise mounted on the ram and also encompassed by the chuck.

Cap-Feeding and Jar-Capping Apparatus, J. Bowen (to Alexander H. Kerr & Co., Inc., Los Angeles, Calif.). U.S. 2,695,125,

Nov. 23. The combination of a tubular magazine for receiving and guiding a stack of caps and a plurality of endless belts having substantially parallel reaches extending longitudinally of said stacks and in gripping engagement with peripherally spaced portions of the rims of a plurality of the lowermost caps in the magazine to support the stack in the magazine.

Ice-Cream Sandwich Package, F. A. Russell (to Russell Corp., a corporation of North Carolina). U.S. 2,695,126, Nov. 23. A container for an ice-cream sandwich comprising an outer packaging structure having an open top and a separable liner for said outer packaging structure, said liner being formed of backed corrugated-paper sheet material and having opposite longitudinal side edges parallel to the corrugations thereof.

Collapsible Carrier for Bottles and Columnar Objects, O. L. Vines, New York, N. Y. U.S. 2,695,127, Nov. 23. A carrier for columnar articles comprising a carrier blank folded longitudinally thereof to form two side walls for encasing said articles, the bottom support for said articles being provided by portions of the blank forming a gusset fold immediately adjacent to said longitudinal fold, the side walls being adhesively joined together transversely thereof.

Shipping Container, W. C. Rendall (to Gaylord Container Corp., St. Louis, Mo.). U.S. 2,695,128, Nov. 23. A container comprising an inner body section having a fixed top wall comprising an outer panel and an inner panel of substantially rigid material, which panels are substantially co-extensive in width and length, and having a foldable handle struck from the outer panel and providing an opening substantially the same as said handle.

Pallet Case, H. O. Powers and G. A. Thwaites (to Libbey-Owens-Ford Glass Co., Toledo, Ohio). U.S. 2,695,705, Nov. 30. In a shipping container a bottom comprising a deck and members elevating said deck from a supporting surface to permit entry of lift forks beneath said deck, a plurality of sheets supported on edge upon the deck and an end section fixedly secured to one end of the bottom and having a portion arranged in overlapping relation thereto.

Readily Removable Bottle Cap, A. L. Faccou, Santa Ana, Calif. U. S. 2,695,720, Nov. 30. A bottle cap comprising a sheet-metal cap having a down-turned corrugated skirt adapted to clinging engage the lip of a bottle around the mouth thereof and a cork insert adapted to overlie the mouth of the bottle disposed within the cap.

Labeling Machine, M. Fairest and D. H. Fairest (to Morgan Fairest, Ltd., Sheffield, England). U.S. 2,695,721, Nov. 30. Top strapping means for a labeling machine comprising a head containing a central plunger, blocks at opposite sides of and separated from the plunger, a block holder slideable in the same direction as the plunger and springs urging the plunger and the block to a position in which their faces are in line with one another.

Air Evacuator for Plastic Bags, S. L. Haley, Walsenburg, Colo. U.S. 2,695,741, Nov. 30. An air evacuator for plastic bags comprising, in combination with a suction pump and a sleeve formed of a soft, deformable sealing material and circumscribed about the casing of the pump, said sleeve being extendable into the mouth end of the bag from which air is to be evacuated.

Apparatus for Controlling Flow of Solid Material, W. M. Boyer (to A. E. Staley Mfg. Co., Decatur, Ill.). U.S. 2,695,742, Nov. 30. Apparatus particularly adapted for use in filling containers with free-flowing solids from a source of supply, comprising a fitting having an upper portion which is rectangular in horizontal cross section with the top inlet opening thereof being adapted to be connected with a source of supply of free-flowing solids, said fitting having a bottom discharge opening to which a container may be connected for filling.

Sterile Filling and Closing Machine, A. V. Wetherby-Williams, Mexico City, Mexico (one-half to W. K. Sheffield, New London, Conn.). U.S. 2,695,743, Nov. 30. In a container filling machine,

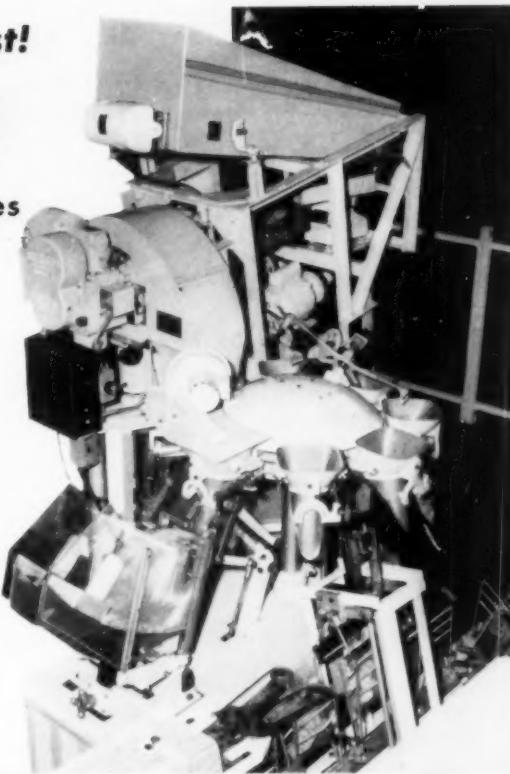
It's New! It's Another Wright First!

WRIGHT BAG MASTER

**Automatically weighs and bag packages
potato chips and like products**

Here's another example of how Wright can increase packaging line efficiency. This new weighing and bagging system does the entire job automatically at record speed and accuracy. Labor costs are slashed to a minimum.

Put the veteran Wright team to work on your particular automation requirement. The answer may be one of our many standard models, or a specially designed system. We will be glad to study your operation and make recommendations.



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**this man knows how
to plan a building!**



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SPECIALIZATION!**

**THESE FIRMS KNOW HOW TO SOLVE
glass-packaging problems!**

The firms listed in this advertisement KNOW glass containers. They keep abreast of changes, improvements and merchandising trends in packaging. Individually and collectively, theirs is unquestioned leadership in their industry.

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BOSTON, Mass.
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BROOKLYN, N. Y.
J. Rabinowitz & Sons

CHICAGO, Illinois
W. Braun Co.

CHICAGO, Illinois
Continental Glass Company

CLEVELAND, Ohio
State Bottle Company

DETROIT, Michigan
M. Jacob & Sons

KANSAS CITY, Missouri
R. Peltzman Bottle Co.

LONG ISLAND CITY, N. Y.
United Bottle Company

LOS ANGELES, California
California-Eureka Bottle Co.

MIAMI, Florida
Magic City Bottle & Supply

MILWAUKEE, Wisconsin
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MINNEAPOLIS, Minn.
Twin City Bottle Company

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NEW YORK, N. Y.
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Northwestern Bottle Co.

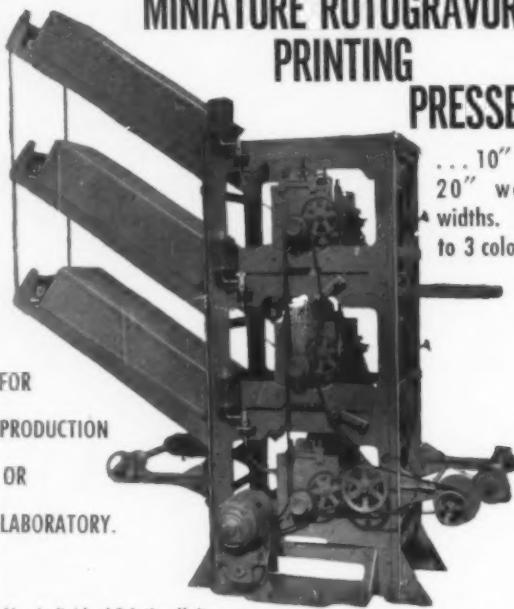
TOLEDO, Ohio
Lucas County Bottle Company

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**Qualified Glass Containers Wholesalers are equipped to
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140 E. Second St., Mineola,
L.I., N.Y.
Pioneer 6-7191

U. S. patents digest

the combination of a rotatable table, a plurality of container filling heads on table, each including means for providing a chamber about the open end of a container, and means for supporting a container beneath each head.

Double-Walled Container, S. E. Gattuso, Ozone Park, N. Y. (8% each to A. Capizzi, P. Capizzi and A. J. Pantano and 25% to J. Radosti). U.S. 2,695,744, Nov. 30. A container comprising a container body including an upwardly opening outer casing and an upwardly opening foil metal liner fitting in the casing and engaging the latter at its upper edge, said foil metal liner being spaced inwardly from said casing at the sides and bottom to define an insulating air space between liner and casing.

Dispensing Carton with Gable Top, C. H. Dixon (to Ex-Cell-O Corp., Detroit, Mich.). U.S. 2,695,745, Nov. 30. A top-end closure for a self-sustaining tubular carton of substantially square cross section having a body portion defined by four side panels of substantially equal width, said top-end closure comprising in combination a plurality of panel extensions corresponding to said side panels, a central laminar rib having a length substantially equal to the lateral dimension of one of said side panels, said rib having a relatively rigid portion of two-ply thickness extending substantially its entire length.

Tuck-In Sleeve, D. E. Woodward (to Raymond Bag Co., Middletown, Ohio). U.S. 2,695,746, Nov. 30. A pre-formed sleeve structure for insertion in a valve-bag with a pre-formed valve, said sleeve structure consisting of a piece of flexible material of generally rectangular configuration, an edge portion of which is folded over onto the body portion of the piece to form a cuff.

Package, G. N. Fisher (to Kraft Food Co., Chicago, Ill.). U.S. 2,695,847, Nov. 30. A food package comprising a closed container and a quantity of expandable dough enclosed therein, said container comprising a tube formed from a single sheet of flexible paperboard material tightly coiled into a plurality of superposed convolutions which are readily separable from one another and a pair of end caps each connected to an edge of said coiled sheet.

Method and Apparatus for Sealing Cartons, P. E. Fischer (to General Mills, Inc., a corporation of Delaware). U.S. 2,696,245, Dec. 7. A machine for sealing closed cartons comprising a mechanism for inverting the carton, a closing plate having a flat upper surface and transferal mechanism sliding the carton along the plate in its inverted position so that the weight of the carton bears against the closing flaps.

Double Tape Cutter, A. L. Hamm (to The Raymond Bag Co., Middletown, Ohio). U.S. 2,696,256, Dec. 7. In combination with mechanism for advancing a series of bags connected one with the other in spaced relation by continuous tape, two telescoping shafts rotatably mounted on a fixed support and extending in the direction of movement of said bags, one of the said shafts being axially movable with relation to the other shaft.

Bottle Closure, S. W. Meneff (to Armstrong Cork Co., Lancaster, Pa.). U.S. 2,696,319, Dec. 7. A bottle closure consisting essentially of a resilient sealing member and a holder for said member to which said member is affixed and held against dislodgment therefrom.

Closure for Collapsible Tubes Which Is Opened by Pressure of Contents, F. E. Smale, Medford, Ore. U.S. 2,696,333, Dec. 7. A dispensing cap for a collapsible paste tube having an externally threaded neck comprising a tubular body, said body being formed with an enlarged cylindrical bottom skirt formed with internal screw threads adapted to engage on neck and having an annular sealing gasket in top portion of skirt, said body being formed at its intermediate portions with a paste discharge aperture, having a plunger slidably positioned in body, said body having a top wall formed with a tapped central opening.

Fibre Container with Lined Opening, H. A. Bergstrom (to Continental Can Co., New York, N.Y.). U.S. 2,696,339, Dec. 7. In a container structure for receiving delicate yarn roving, sliver or comparable material, a generally cylindiform body having closely adjacent to its open top an inwardly bent bead defining an open throat through which the material is introduced into and removed from the container.

Heavy-Duty Fibre Drum for Liquids and Semiliquids, H. A. Bergstrom (to Continental Can Co., New York, N.Y.). U.S. 2,696,340, Dec. 7. A heavy-duty fibre container comprising a

Tri-Sure® Coated Polygonal Flange

To give you better LINED CONTAINERS!

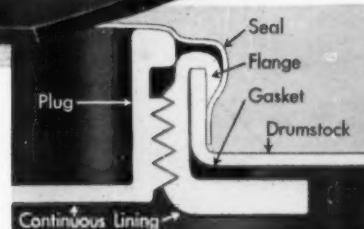
—another development in the
Tri-Sure program to help shippers
solve their container problems



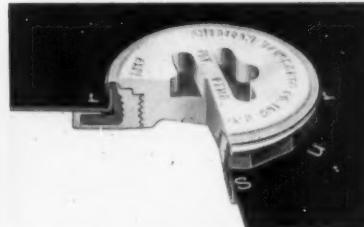
Drumstock is bent to form a collar so that neck of flange can be keyed to container when inserted.



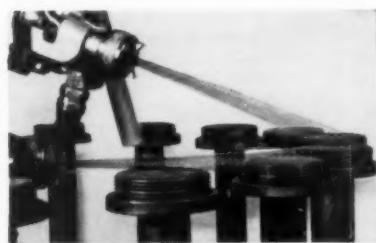
Flange inserted in drumstock. Polygonal shape locks flange securely.



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body of fibreboard having an inner protecting liquidproof liner extending all the way to the bottom end of the body wall, a bottom heading consisting of a filler disk of laminated fibreboard and an inner liquidproof protecting liner.

Bottle Carrier, C. L. Gilbert (to Robert Gair Co., Inc., New York, N.Y.). U.S. 2,696,341, Dec. 7. A bottle carrier consisting of sheet material formed with fold lines at which the material is folded for shaping the carrier from a blank, said carrier being collapsible from an expanded to a folded form.

Bellows Folding Machine, A. C. Mickey, A. McMillan and B. Becker (to General Motors Corp., Detroit, Mich.). U.S. 2,696,767, Dec. 14. In a bellows folding machine, a tube-forming mandrel having a cylindrical body and a polygonal end portion, means to support said mandrel at the body end, means to guide a tube about the mandrel and means to continuously move said tube off the other end of the mandrel and having internal formers located with said polygonal portion of the mandrel.

Control System for Box-Blank-Forming Machines, W. C. Oberem (to Colt's Mfg. Co., Hartford, Conn.). U.S. 2,696,769, Dec. 14. In a machine for making a foldable blank for a box, the combination of a support having a longitudinal pathway for a sheet of stock from which a blank is to be made and normally rotating feed rolls for engaging the sheet to feed it longitudinally along the said pathway.

Packaging Machine, E. M. Ervin, Florence, S.C. U.S. 2,696,778, Dec. 14. A wrapping machine comprising means for carrying a supply of adhesive tape around an object to which the free end of the tape is adapted to be fixed and having a motor driving said carrying means and a switch for breaking the source of power to said motor.

Container Construction and Closure Therefor, F. J. Obeck (to R. T. French Co., Rochester, N.Y.). U.S. 2,696,935, Dec. 14. A dispensing container having adjoining walls providing an enclosure, one of said walls having a perforated area and a flexible strip element that is substantially straight for most of its length and is mounted on said wall and has one end covering said perforated area.

Container Sealing Mechanism, W. R. Courtney, Chicago, Ill. U.S. 2,696,939, Dec. 14. A container-top sealing mechanism including a vertically and slidably supported post, a foot secured to the bottom end of said post and adapted to rest on a cap to be sealed, a collar slidable on said post, a bifurcated rocker arm straddling said post, links between said collar and the bifurcated rocker arm and toggle joints pivoted to said foot and collar, the toggle joints having fingers adjacent to the foot and movable into contact with cap and operable only after said collar has ceased to advance.

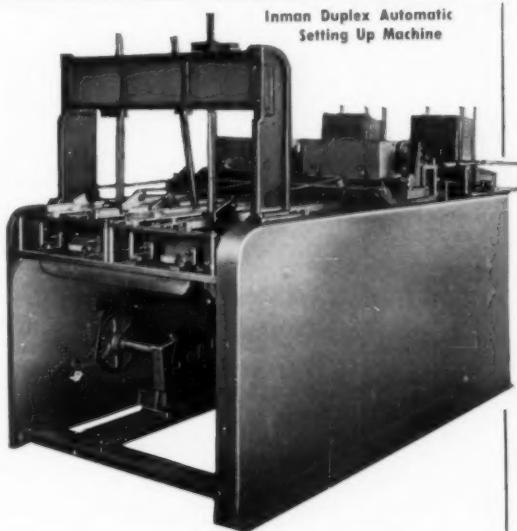
Semi-Automatic Bottle-Capping Machine, R. H. Andresen, Chicago, Ill. U.S. 2,696,940, Dec. 14. A bottle-capping mechanism comprising in combination, a frame mounted for vertically adjustable reciprocation thereon, a motor means carried by the frame, a drive shaft connected therewith and having a worm thereon, a worm gear intermeshing with said worm and a cam formed integrally extending outwardly from said worm gear and a rotatable spindle vertically reciprocable in said portion of frame.

Agitating Mechanism for Carton-Filling Machines, C. J. Malhot (to F. B. Redington Co., Chicago, Ill.). U.S. 2,696,941, Dec. 14. In combination, a carton-filling machine having a carton conveyor adapted to move a series of open-ended cartons successively through a carton-filling zone and an article conveyor adapted to move a series of measuring cups through the zone in timed relation to the movement of the cartons to bring the measuring cups into filling register with the cartons for flow by gravity of the articles from the cups to the cartons.

Collapsible Bottle Carrier, W. A. Ringler (to The Gardner Board & Carton Co., Middletown, Ohio). U.S. 2,696,842, Dec. 14. A two-compartment bottle carrier formed from a single blank of sheet material having a bottom panel formed by a pair of foldably connected bottom sections, a pair of side panels foldably connected to the opposite side edges of the bottom panel, a pair of end-panel sections at each end of the carrier foldably connected to the adjacent side edges of the side panels and a pair of inwardly extending center partition sections arranged in back-to-back relationship and foldably connected to each pair of end-panel sections.

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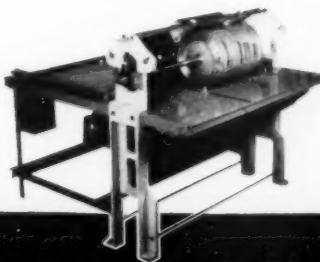
SPECIFICATIONS

Depth	3 1/4" to 4 1/2"
Maximum Length	12"
Maximum Width	12"
Largest Blank	16" x 17"
Machine Speed	Up to 75 per minute
Production	Up to 150 pieces per minute
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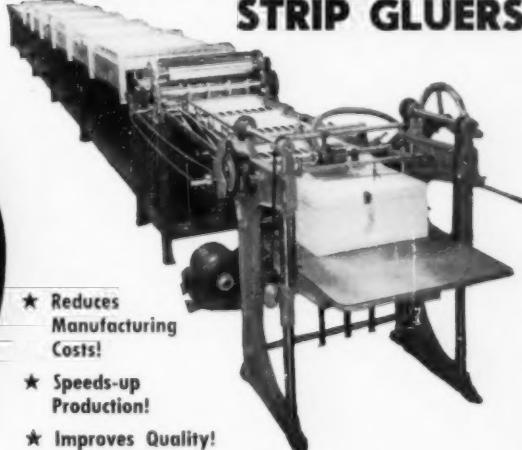
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Effects of cathode-ray irradiation

(This article continued from page 139) doses ranging from zero to 15-million rep the transmittance was measured at the one wave length of 400 m μ .

Summary of results

The water-vapor permeability and the greaseproofness of nine standard packaging materials were not affected by cathode-ray irradiation at a dose level of 3.5-million rep (Tables I and II).

The oxygen permeability of polyethylene film was not significantly changed by exposure to 3-million rep of cathode rays (Table III).

Of five packaging materials tested for tensile strength, one only showed a decrease in this function following irradiation with 3.5-million rep (Table IV).

The heat-seal strength of two packaging materials was unaffected by irradiation with 2-million rep. As no significant variations in strength of seal were found between different portions of the same sample and between different samples, the average strength of seal and the standard deviation were computed from the results for all samples in any given group (Table V).

Irradiation produced a slight darkening of saran film, ascribable to a decrease in the transmittance of light through the film, especially in the blue region of the spectrum (Fig. 3). This decrease in transmittance was a function of dose. In the range from zero to

15-million rep, the decrease in transmittance at a wave length of 400 m μ was only slight at the lower dose levels, but became considerably greater as the dose increased (Fig. 4).

In general, it may be assumed that irradiation doses of the order of magnitude required for insect eradication in packaged foods will have little or no effect on the functional properties of the flexible packaging materials studied.

Acknowledgment

Appreciation is expressed to Prof. J. G. Trump and K. A. Wright of the Department of Electrical Engineering, Massachusetts Institute of Technology, for their continuing cooperation in permitting us to use the Van de Graaff electrostatic generator in their laboratory.

References

1. Proctor, B. E., and Goldblith, S. A., Radiation Fundamentals and Their Applications in Food Technology, *Advances in Food Research*, 3, 119-196, 1951.
2. Dunn, C. G., Campbell, W. L., Fram, H., and Hutchins, A., Biological and Photo-Chemical Effects of High-Energy, Electrostatically Produced Roentgen Rays and Cathode Rays, *J. Appl. Phys.*, 19 (7), 605-616, 1948.
3. Trump, J. G., and Proctor, B. E., Sterilizing with Electrons, *MODERN PACKAGING*, 24 (11), 105-106, 164, 1951.
4. Sisman, O., and Bopp, C. D., Physical Properties of Irradiated Plastics, Rept. ORNL-928, p. 9, Oak Ridge National Laboratory, Carbide & Carbon Chemical Co., 1951.
5. Proctor, B. E., Lockhart, E. E., and Goldblith, S. A., The Application of Electronic Treatments to Destruction of Insects in Packaged Military Rations and Packaging Materials, Final Report for June 17, 1952-Dec. 31, 1953, on Contract DA 11-009-QM-19888 with Q.M. Food & Container Institute for the Armed Forces, 1954.
6. Trump, J. G., and Van de Graaff, R. J., Irradiation of Biological Materials by High-Energy Roentgen Rays and Cathode Rays, *J. Appl. Phys.*, 19, 599-604, 1948.
7. Trump, J. G., and Cloud, R. W., The Production and Characteristics of 3,000-Kilovolt Roentgen Rays, *Am. J. Roentgenol. Radium Therapy*, 49, 531-535, 1943.
8. TAPPI Standards, Method T 448/M-49, Tentative Standard Aug., 1940. Corrected Sept., 1949.
9. Landrock, A. H., and Proctor, B. E., Gas Permeabilities of Films, *MODERN PACKAGING*, 25 (10), 131-135, 199-201, 1952.
10. Landrock, A. H., and Proctor, B. E., The Simultaneous Measurement of Oxygen and Carbon Dioxide Permeabilities of Packaging Materials, *TAPPI*, 35, 241-246, 1952.
11. Lavers, C. G., Grease Resistance, *MODERN PACKAGING*, 21 (7), 147-149, 1948.
12. TAPPI Standards, Method T 454/m-44.
13. Packaging Institute, Standard Methods. 6. For Tensile Strength and Elongation, *MODERN PACKAGING*, 19 (12), 153-172, 1946.

Fired-on decals

(This article continued from page 117)

As soon as the decal has been applied to the bottle, the operator removes the container and places it, unlabeled side down, on a short chute down which it slides to the inspection table. In this manner, the printing is protected against damage.

The inspectors strip off the paper backing, leaving the printing and lacquer film intact. Provision may be made later to remove the paper by means of an air jet. After inspection, the bottles are stood upright on metal trays and they are then transferred to the lehr.

Another operator removes the containers from the trays and deposits them on the mesh conveyor belt, with the label side facing upward.

From this point the procedure is exactly the same as that followed for the hand-applied, screened labels. The process of pre-heating, firing and annealing the bottles in the lehr, where they are exposed to a maximum temperature of approximately 1,150 deg. F., requires about one hour. During the trip through the oven, the lacquer film is removed by the intense heat, leaving the bottle surface perfectly clear except for the black letters, which are fused into the surface of the containers.

Upon removal from the lehr, bottles are placed in service cartons and taken to another department, where they are passed through a spray-type washer and air-drying operation prior to filling. The containers are accu-

rately filled by count and the polyethylene caps applied on automatic packaging lines.

Ceramic decals of the same type, some involving two or more colors, are also being tested by other pharmaceutical manufacturers. Such decals may be used not only by firms having their own lehr equipment, but also for large-scale orders by bottle manufacturing and decorating companies.

CREDITS: Sample bottles and polyethylene closures by T. C. Wheaton Co., Millville, N. J. Thermo-Cal ceramic decals by The Meyercord Co., 5323 W. Lake St., Chicago 44. Labeling machine by New Jersey Machine Corp., 16 St. & Willow Ave., Hoboken, N. J. Shipping boxes by National Office Supply Co., 650 S. Genesee, Waukegan, Ill.

Canned foods

(This article continued from page 99) spending less and less time in the kitchen and relies more and more upon canned foods, fruits and vegetables, as well as other convenience items.

The development of new markets and new product classifications for food in cans also points to an even greater potential. Specialty products are ever on the increase. The development of new products, such as the concentrated juices, has contributed greatly to the increased per-capita use of canned foods. The prepared "complete meals" in cans are adding to the market, too.

The use of dietetic foods, baby foods and specialized health foods has contributed greatly. Foods for elderly people may offer interesting possibilities. The development of new recipes in prepared foods by the canners (such as taking whole-kernel corn and adding peppers and calling it Mexican Corn and the specialized bean recipes) is contributing to a richer market.

Increased promotional activity is continually stimulating a greater demand for canned foods. This promotion has taken the form of co-operative advertising and merchandising by canners and canners' associations, can manufacturers and their associations. The total impact upon the consumer is terrific.

The greatest expenditures in our history in food merchandising and distribution centers (the shopping centers, supermarkets and suburban centers) are spurring larger unit sales which generally make for higher consumption per capita of canned foods.

Continuing advancements in production efficiency, contributing to the "best buy" designation of canned foods, will assure increased consumer favor. It has been significantly pointed out, as we head into tomorrow's era of automaticity, that no grocery product lends itself better to push-button operations than do canned foods.

Finally, the dynamic character of packaging itself assures major improvements in cans, glass, packaging-line equipment and in the merchandising performances of the processed-foods containers—thus practically guaranteeing that canned foods will maintain their supremacy as far into the future as any packager-merchandiser can now see.

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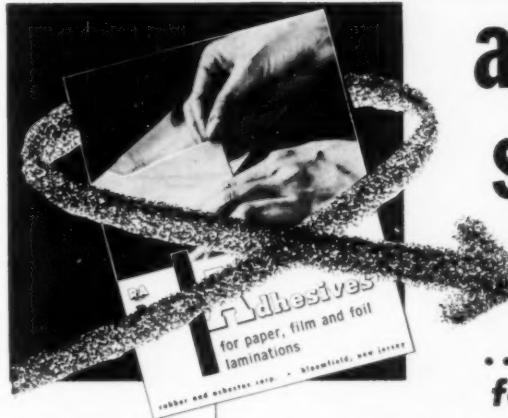
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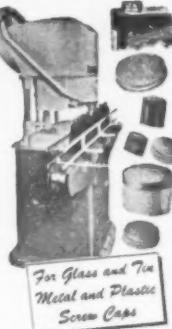
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How do you test package design

(This article continued from page 89) the selection of package design, evidence of the principle is discernible in a number of packaging programs.

When a leading milling company was pre-testing original designs for cake-mix packages, for instance, consumers were asked questions which would produce indirectly the information the company was seeking, like: "Which of these packages do you think will make the best cake?" They were not asked, "Which of these packages do you like the best?"—a question which might have produced only an arbitrary opinion on design.

Another example is that of a food company testing the design for a coffee package. A consumer panel was sent three sample packages, each containing the identical product, but each with a different package design. The respondents were asked to say which of the three coffees they liked best. The coffee in one particular package was preferred over the other two by a sweeping majority, indicating that one of the packages apparently had much greater appeal than the other two. However, when asked if they would buy the same coffee in another package, the majority said, "Yes," not knowing, of course, that they had been getting the same coffee in other packages.

Research departments of all companies are keenly interested in these new dimensions in research to obtain the qualitative data that up to now have not been obtained through large-scale opinion polls.

Said one research man for a large drug house, "We are looking for a simple psychological principle that we could apply in combination with our present studies, similarly to the kind of aptitude tests sometimes used in personnel work. We still would not rely on this completely, but like aptitude tests, it might help as a short cut to the answers."

It was also pointed out that such testing would be an aid to imaginative developmental programs. The company that relies on policies shaped by consumer opinions, according to one source, will be "safe," but reliable knowledge of consumer habits and behavior patterns related to merchandising will help to encourage bolder ventures with a greater degree of certainty.

10. Market tests. As everybody

knows, the only real test of how a package sells is to get it on the market and try it. This, of course, implies trial runs. Most firms usually start with limited production and tests in selected markets. Apparently there is no set formula for selecting the test areas. They may be determined by concentration of distribution, the type of outlets desired—any number of reasons, depending on the type of package or desired information—or just because the company can get the best dealer co-operation in certain spots.

When the package change involves a whole family of products, it is sometimes advisable and economical to conduct the market test with only one product.

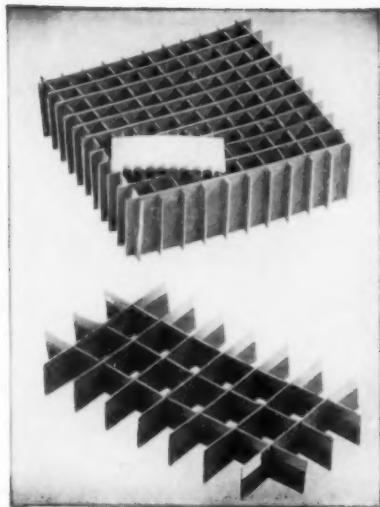
If management does not wish to risk a change first on its product leader, then occasionally its second best seller may be used as the test package. This procedure has the advantage of permitting a reduction of inventory on old packages while the new are being introduced gradually, as success becomes apparent.

In the case of redesigned packages, there is always the problem of whether to continue selling old and new together, or to withdraw or clear out all old inventory with special offers or other selling devices and start fresh with all new packages. This question was discussed at some length in MODERN PACKAGING a few years ago.³

Some packagers say that old and new selling side by side prove very little because new packages always outsell old ones. This is often the case with products where freshness is a factor. The consumer will nearly always select the new package, because she thinks it was packed more recently. The designers and packaging experts disagree heatedly with this. It would be a sad situation, they say, if new packages designed on the basis of both experience and theory did not begin doing a better job immediately than the old ones.

Another research director for a toiletries company said that his company had never been able to establish conclusive results by selling old and new package designs side by side. If the test is conducted long enough, backed by identical promotional effort in relatively the same shelf space and position, with a researcher on

³ See "Change-Over," MODERN PACKAGING, Feb., 1948, p. 95.



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hand to keep the shelf stocked and watch the results, the new packages may tend to sell faster at first, then level off until both sell about equally.

It was pointed out, too, that brand loyalties vary greatly between different products. In some product classifications, continuing loyalty may be expected from one-third of the users while the other two-thirds are switchers. In the cereal field, shoppers are constantly switching from product to product and brand to brand for variety and due to the influence of pre-
taste appeals on children.

A new package form or a package with a new kind of convenience feature may require closely controlled market tests. Bristol-Myers figured that a certain number of shoppers would try its new roll-on deodorant package once because of novelty, but they wanted to know if the same shoppers would come back for more. In test markets, therefore, co-operating dealers were paid a cash incentive to get the names and addresses of all purchasers to check whether shoppers returned for second purchases.

This is excellent practice, but it is costly and some manufacturers say it is becoming increasingly difficult to get the co-operation of store operators to carry out such follow-through. There are fewer employees in self-service outlets to collect necessary data and little time for it at a check-out counter.

Test runs of new packages are often used to determine the most acceptable package, consumerwise, among several types. In the battle of the cigarettes, Philip Morris & Co., Ltd., has been testing a long-size Marlboro cigarette in a flip-top paperboard box in Dallas and Fort Worth, Tex.; a king-size ivory tip in a snap-open regular pack in Rhode Island and Massachusetts; a long-size cork-tip filter in the snap-open pack in Rochester, N. Y.; a long-size cork-tip recessed filter in a special flip-top box in Denver. Consumer behavior in test stores has been observed by the most modern methods—the use of mirrors and hidden cameras to catch shopper reactions. In addition, the company reportedly has been testing different types of surface designs by practically all known statistical and optical methods. If Marlboro comes up with a winning answer, it will be the result of one of the most extensive package-testing jobs.

The flip-top paperboard box has



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turned out to be the final package because research showed both men and women wanted an easier-opening package that would not crush or sift in purse or pocket. The size of the box and the top opening resulted from men's preference for a package they could keep in shirt or jacket pocket without removing the package to extract a cigarette. Package colors were selected as the result of ocular measurement tests—red and white with midnight-blue lettering. The shield symbol on the final package was chosen instead of the illustration of a cigarette used on some of the test packages as the result of overwhelming preference in the tests.

It has not been the purpose of this article to go deeply into the *modus operandi* of the many known research techniques. Nor is it recommended that every packager pursue all of the 10 steps discussed. But it is hoped that the foregoing will supply a necessary background summary of what can be done when the inevitable question comes up, "How can we be sure it will sell?"

If scientific or theoretical principles to determine package acceptance are employed, the most reliable and experienced research assistance should be sought, the same as an intelligent company selects the most experienced designers.

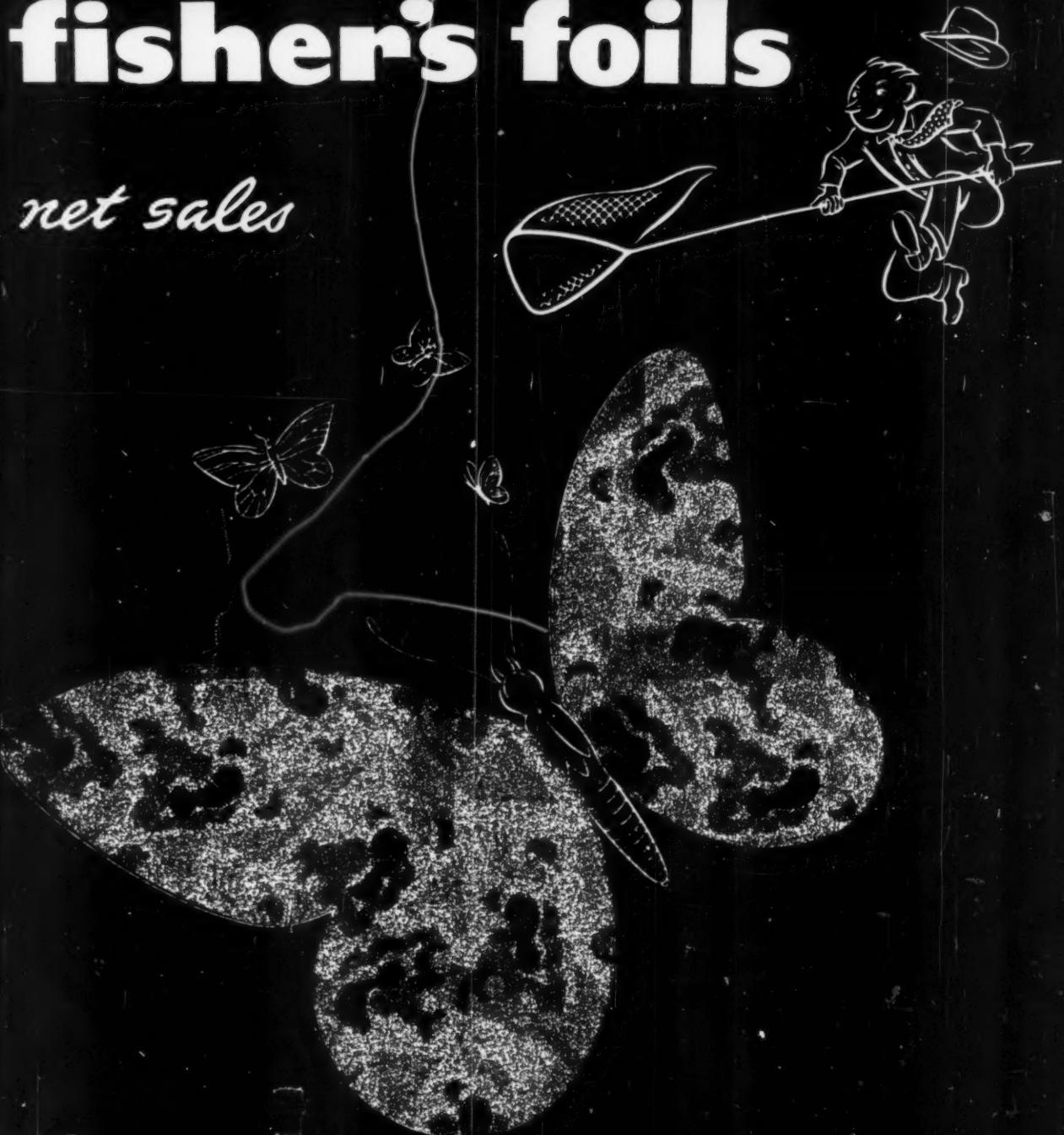
The many comments made by leaders in the field and the earnest attempts to obtain true answers are convincing proof, at least, that industry is trying to get beyond that point where final decisions may hinge on what the president's wife or the boss's secretary may say.

New trade group

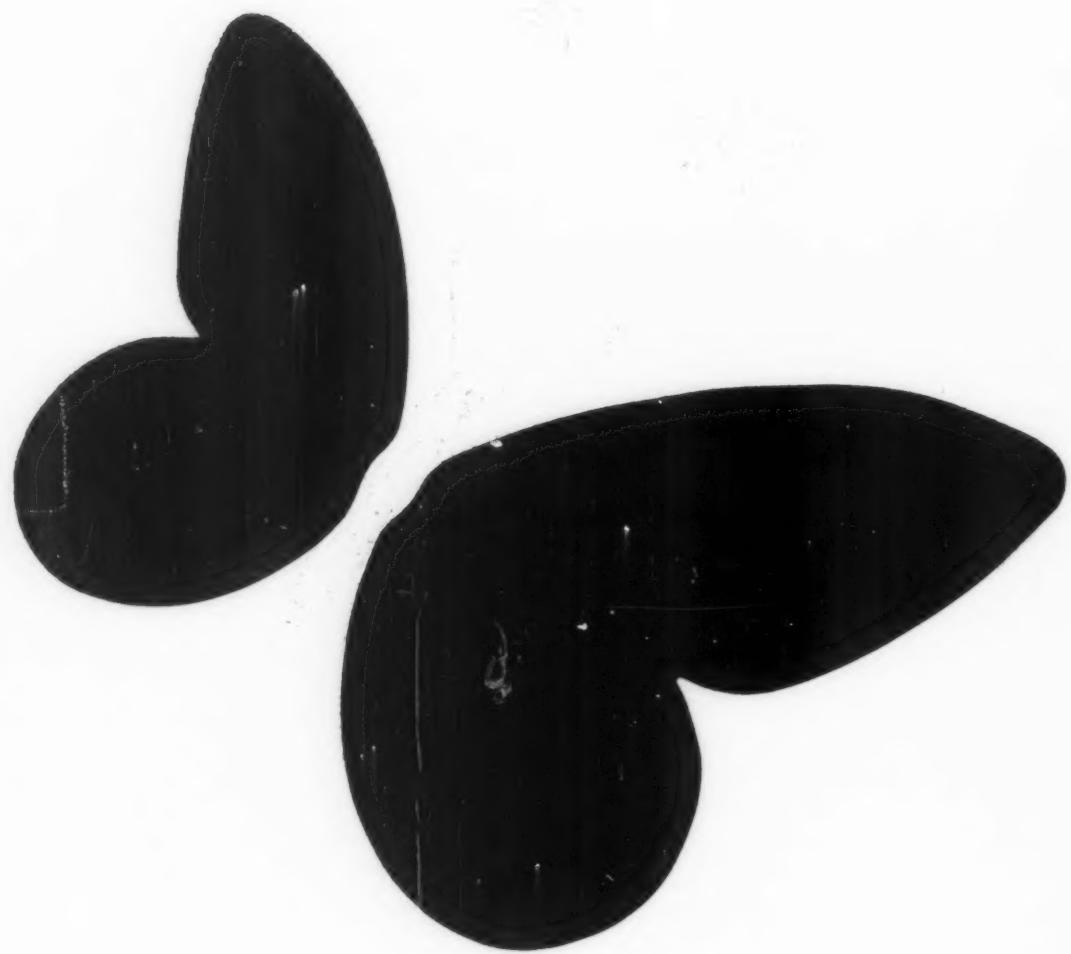
Packagers of carbonated soft drinks in cans have organized a new trade association, The Soft Drink Canners Assn., Inc. Walter S. Mack, president of C & C Super Corp. and former Pepsi-Cola president, has been elected president of the new association, which has headquarters at 270 Park Ave., New York. Other officers are: vice president, Morris Silver, Cott Bottling Co.; secretary, Robert K. Rogers, Can-a-Pop Beverage Co.; treasurer, A. Mele, C & C Super Corp. Directors include Mr. Mack, Mr. Silver, Elliot A. Johnson, Mission Div. of Weber Waukesha Brewing Co.; T. H. Stanley, Nehi Corp.; and Louis Tose, Bev-Rich Products, Inc.

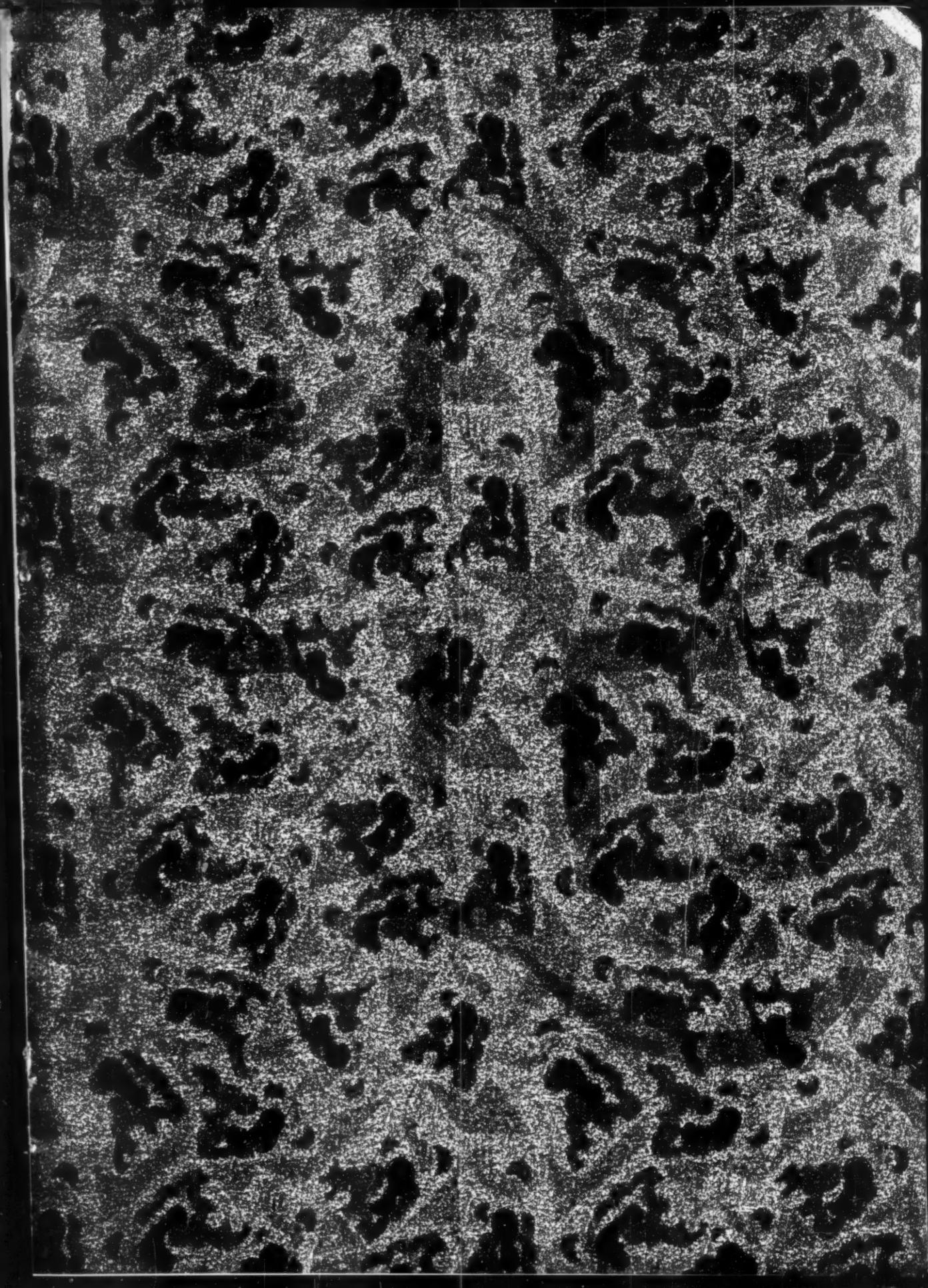
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1955 Packaging Show

New records will be set for attendance, area and number of exhibitors at the forthcoming 24th National Packaging Exposition, according to the American Management Assn., sponsor of the event. The 1955 show, to be held April 18-21 in the New Exposition Hall and South Hall of Chicago's International Amphitheatre, will occupy approximately 140,000 sq. ft. of floor space, exhibitors will number some 375 and attendance is expected to reach 30,000. This is the first time that the Packaging Show has been scheduled for the International Amphitheatre. Size of the Amphitheatre, with its newly constructed street-level Exposition Hall, makes it possible to put on one floor the complete panorama of the newest developments in the industry.

Trends in both the technical and merchandising aspects of packaging will be summed up at the accompanying AMA Packaging Conference, which will be held April 18-20 at the Palmer House, Chicago. Topics on the three-day program will reflect the increasing inter-relationship of packaging and marketing, and the tendency of American business to give packaging staffs representation in the highest councils of management. More than 1,500 are expected to attend the conference.

Industrial packaging and packing will receive more attention this year than ever before, according to A. K. Thorn, AMA packaging division manager. Particular emphasis will be placed on the potential for greater efficiency and cost saving in packaging. At concurrent sessions, a number of specific areas will be explored in detail, including standardization, instrumentation, quality control and the correlation of design in both the product and its package.

The conference will open at 10 a.m. Monday, April 18, and close after lunch on Wednesday, April 20. Tuesday and Wednesday sessions will begin at 9:30 a.m.; Monday and Tuesday sessions will close at 5 p.m.

The exposition will be open for 32 hrs., six more than last year. Time schedule for the exposition is as follows:

Monday, April 18, 10 a.m.-6 p.m.

Tuesday, April 19, 10 a.m.-9 p.m.

Wednesday, April 20, 10 a.m.-6 p.m.

Thursday, April 21, 10 a.m.-3 p.m.

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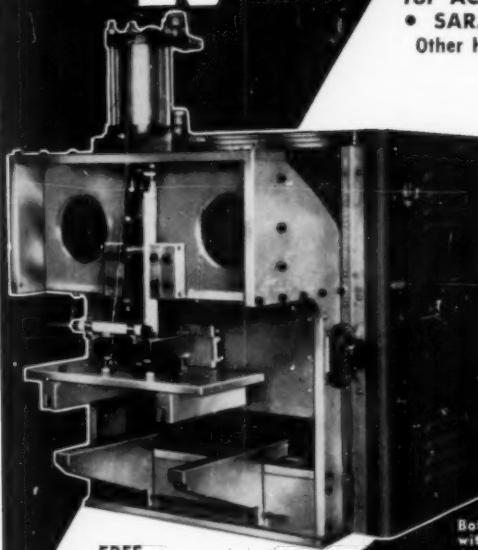
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Other Hard to Seal Vinyl Materials



Versatile!

The only machine that can change from box corner sealing, to flat goods sealing, to contour sealing (sealing of vacuum formed or three dimensional material), at a moment's notice.

• Model #DH - HF - 1
seals 20 linear inches on
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seals 40 linear inches on
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Both models are portable bench units
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Hospital blood banks now place blood containers and vials in Thilco printed, specialty paper bags — replacing wired-on vials, identification tags, etc. These neat Thilco "unit-packs" give complete blood type specifications, provide easier inventory, require less handling, prevent breakage and reduce cost.



THILCO "Tailor-made" BAGS COMBINE FOUR PACKAGING ADVANTAGES INTO ONE...at greatly reduced cost!

- PRODUCT PROTECTION
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- CONTENT ANALYSIS

THILCO SPECIALTY BAGS CAN SAVE YOU MONEY

Thilco product-protection bags save time and labor and eliminate costly boxes and other wraps. PRINT-DECORATED with instructions, contents, advertising and other identification; no costly inserts are needed.

ESPECIALLY MADE FOR YOUR REQUIREMENTS

Thilco's wide range of waterproof and stain-proof krafts, waxed grades, Glassines and Greaseproofs, and Poly-coated papers permit "tailor-made" bag conversions for any specific protective need.

LET THILCO "IMAGINED PACKAGING" HELP YOU
Give us complete information regarding your packaging problems. Our "Paper Imagineers" will study your requirements and send you closely aligned samples and suggestions — They may effect substantial savings over your present methods.

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Functional Papers FOR PROTECTION THAT COUNTS!

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CINCINNATI
DETROIT • MINNEAPOLIS

THILMANY PULP & PAPER COMPANY
KAUKAUNA • WISCONSIN

Designers' best

(This article continued from page 128)
Mt. Wolf, Pa., and Lockwood Folding Box Co., Philadelphia. **Honorable Mention:** Old Taylor Bourbon carton, designed by Charles North Studio, New York, for National Distillers Products, Inc. **Supplier:** Cartons, Robert Gair Co., Inc., New York.

7. Textiles and Soft Goods—Top Award: Piccolino Swim Trunks and Knit Shirts packages, designed by Mel Gussow Associates, New York, for McGregor Sportswear Co. **Suppliers:** Containers, Miro Container Co., Brooklyn. Merchandisers, Salzer Display Co., New York.

Honorable Mention: Sarong, Jr. Girdle carton for Sarong, Inc. **Supplier:** Cartons, Robertson Paper Box Co., Montville, Conn. **Honorable Mention:** Harmony House Towels package, designed by Don Marvine of the Sears, Roebuck & Co., staff. **Supplier:** Wraps, Paper Package Co., Indianapolis, Ind.

8. Hardware, Household and Sporting Goods—Top Award: Tac-It-Tite envelope for brushes, designed by L. E. Foulkrod of Whiting-Adams Co. in co-operation with the supplier. **Supplier:** Envelopes, U. S. Envelope Co., Springfield, Mass.

Honorable Mention: Ronson Lighter carton, designed by Mort Fidler and William Becker of the Ronson Corp.⁷ staff. **Supplier:** Cartons, Hinde & Dauch Paper Co., Sandusky, Ohio. **Honorable Mention:** Grass-seed carton for Ferry-Morse Seed Co. **Supplier:** Cartons, Richardson Taylor-Globe Corp., Cincinnati, Ohio.

9. Gift Merchandise—Top Award: Sylvania Bantam 8 Plastic Gift Pak (see Irwin D. Wolf Award).

Honorable Mention: Christmas line of "Carriage Trade" cosmetics, designed by Eric de Kolb of Helena Rubinstein, Inc. **Suppliers:** Wraps, House of Harley, Inc., New York. Folding boxes, J. Landowne Co., Brooklyn. Set-up boxes, George H. Snyder, Inc., Philadelphia. **Honorable Mention:** S & W gift boxes, designed by Douglas Kennedy of Foote, Cone & Belding, Chicago, for S & W Fine Foods, Inc. **Supplier:** Cartons, Schmidt Lithograph Co., San Francisco. **Honorable Mention:** Hanes gift hosiery box, designed by Alma Shon of Neiman-Marcus Co., Dallas, Tex.,

⁶ See "Sears and Self Service," MODERN PACKAGING, Dec., 1954, p. 87.

⁷ See "The Corrugated Box Steps Out," MODERN PACKAGING, Jan., 1955, p. 82.

for Hanes Hosiery Mills. *Supplier:* Paperboard boxes, Strauss, Golman & Goldman Co., Dallas, Tex. *Honorable Mention:* Neiman-Marcus gift packages also designed by Alma Shon.

10. Redesigned Packages—Top Award: "Cross Country Rose" carton, designed by C. W. Harper of the Sears, Roebuck & Co. staff in cooperation with W. A. Ringler of supplier's staff. *Supplier:* Gardner Board & Carton Co., Middletown, Ohio.

Honorable Mention: Gluek Beer line, designed by Lippincott & Margulies, Inc., New York, for Gluek Brewing Co. *Suppliers:* Bottles, Owens-Illinois Glass Co. Crown caps, Armstrong Cork Co., Lancaster, Pa.; Crown Cork & Seal Co.; Mundet Cork Corp., North Bergen, N. J.; W. H. Hutchinson & Son, Inc., Chicago. Foil labels, Reynolds Metals Co. Cartons, Old Dominion Box Co., Inc., Lynchburg, Va.; Lengfield Bros., New Orleans; American Coating Mills, Div., Robert Gair Co., Chicago. Shipping containers, Container Corp. of America; Gaylord Container Corp.; Kraft Corrugated Containers, Inc., Bayonne, N. J. Paper labels, Lustour Corp., St. Louis, Mo. Carry cartons, Robert Gair Co., Inc., New York. *Honorable Mention:* White Swan Serviettes, designed by Robert G. Neubauer, Inc., Bridgeport, Conn., for The E. B. Eddy Co. *Supplier:* Wraps and folding cartons, R. L. Crain, Ltd., Ottawa, Ont.

11. New Package for a New Product—Top Award: Carton for AD detergent, designed by William A. Troy of the Colgate-Palmolive Co. staff. *Supplier:* Cartons, National Folding Box Co., New York.

Honorable Mention: Showbag Cocktails bags designed by D. J. McKay and R. M. Wohl of Central States Paper & Bag Co., St. Louis, Mo. *Supplier:* Polyethylene bags, Central States Paper & Bag Co. and Visking Corp., Chicago. *Honorable Mention:* Regency Portable Radio, designed by Joseph J. Andrews of the supplier's staff for Sanford Electric Corp. *Supplier:* Cowhide cases, Craft Industrial Case Corp., New York.

International—Top Award: Bentz-Papier stationery line, Heinrich Arthur Hoesch, Kreuzau Über Duren, Germany.

Honorable Mention: Lindt Taster chocolate package, Lindt & Sprungli, Zurich, Switzerland. *Honorable Mention:* Lu Cookies line, Institut Francais de L'Emballage et du Conditionnement, Paris, France.

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Containers?**

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This marvelous new machine compels a reexamination of the packaging possibilities of your product.

**ECONOMICAL, HIGH SPEED
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The pronounced sales-appeal of flexible packages is overturning merchandise concepts in every field. You can now enjoy these preferred features—visability, complete protection and durability, as well as the economic advantages flexible packaging affords—lower initial cost, lesser storage space and shipping weights. Roto-Wrap brings them to you with the simplest operation at the highest commercial speeds (rates over 100 packages per minute attainable).

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ARMI award winners

Top award in the first annual packaging competition sponsored by the American Rack Merchandisers Institute went to the attractively labeled Copper Brite household copper-polish bottle entered by Copper Brite, Inc., Los Angeles. Second-place winner was a window-type folding carton used by Milwaukee Lace Paper Co., Milwau-



FIRST AWARD went to Copper Brite for its effective label.

kee, for its Milapaco printed cocktail napkins. These awards, along with a number of honorable-mention citations, were made by Arthur Weiss, chairman of the judging committee, during the annual ARMI meeting held in Chicago early in January.

More than 400 entries were received for the first ARMI package competition. The six categories covered included bags, boxes, cards, labels, sleeves and tags. The competition judges, in addition to Mr. Weiss, were James W. Goff, chairman of the committee on packaging education at Michigan State College, and Charles Kasak, director of packaging and graphics for the Chicago office of Raymond Loewy Associates. In making the awards, Mr. Weiss stated that improved packaging had been a major factor in building sales of non-food products sold through supermarkets to a total of \$1.7 billion during 1954. Emphasizing the importance of effective packaging for this type of selling, Mr. Weiss reported that 87.2% of non-food sales in supermarkets are of the impulse type and that a typical consumer looks at the average item only 0.3 of a second during her trip through the store.

Both of the winning packaging entries made effective use of black as a background color to set off lettering and other package details. The Copper Brite label, lithographed in four colors, is protected by a clear cello-



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MODERN PACKAGING

phane lamination which guards the label against scuffing—a particularly valuable asset for self-service merchandising. Designed by Alan D. Brite, president of the organization, the label highlights a sparkling copper-bottom skillet on the display panel. An illustration of the former package, along with price and highly legible use instructions, appears on the back panel of the wrap-around label. On the Milapaco package with its cellophane window, the colorful design of the napkins themselves adds interest and sales appeal. The Milapaco napkin carton is produced by Cornell Paperboard Products Co., Milwaukee.

Packages receiving honorable-mention awards were: Alladin Plastics, Inc., for its refrigerator-container set; Aluminum Cooking Utensil Co., Inc., for its square griddle label; Aluminum Goods Mfg. Co., for its measuring set; Aluminum Specialty Co., for its egg-poacher labels; Cadie Chemical Products, Inc., for its dusting and furniture-polishing-cloth package; Chicago Metallic Mfg. Co., for its baking-pan labels; Laurill Co., Inc., for its paint-brush packaging sleeve; Eko Products Co., for its lid flipper; Edlund Co., Inc., for its jar-opener tag; Fiestaline Products Corp., for its ironing-board pad and cover set;



SECOND PLACE was won by Milapaco napkin window carton.

Nevco Wood Products Co., Inc., for its trouser-hanger set; The Papercraft Corp., for its ribbon package; Rit Products Corp. for its dye-product box; and Vaughn Mfg. Co. for its wall can-opener box.

Addressing one of the ARMI meeting sessions, Harry W. Ketchum, acting director of the Business and Defense Services Administration, U. S. Dept. of Commerce, said that consumer purchases 10 years from now are expected to reach a total of

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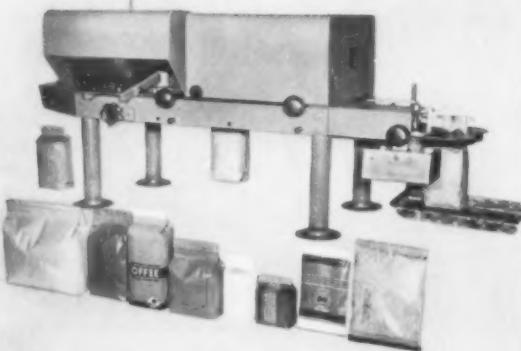
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Something Really NEW in a Paper Bag Closing Machine

- DOUBLE FOLDS and GLUES
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- DOUBLE FOLDS, HEAT SEALS and GLUES

FRY CONTINUOUS-MOTION Bag Closing Machine (MODEL GS 54)



Makes strong, sift-proof closures.
Other models available. Send for descriptive literature.

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Progressive's new precision-built, high-speed Rotary Capping Machine is designed for positive capping of special type caps.

- Positive control of caps from the hopper until tightened on the bottle
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Hackensack, N. J.

\$340 billion annually, or slightly under the nation's gross national product in 1954. Gross national product, Mr. Ketchum estimated, will grow to about \$535 billion by 1965, in comparison with \$356 billion in 1954.

Copies of the new ARMI 16-page industry manual on display techniques, entitled "Non-Food Volume Through Point-of-Sale Display," were distributed at the January meeting. The manual illustrates some 35 types of point-of-sale displays.

Since its formation in January, 1950, the association has grown 20-fold and now includes, in addition to service distributors, 110 manufacturers of non-food products that are merchandised through supermarkets. Allen Levis, ARMI president, reported. According to Mr. Levis, more than 75% of the nation's supermarkets now carry housewares and the space allocated to this type of merchandise is growing rapidly.

Sunsweet's switch

(This article continued from page 106) doubts about the wisdom of redesigning their packages, such fears were quickly dispelled by the lyrical response the new wraps evoked from the brand's many brokers.

Comments from these men, experienced veterans in the merchandising wars, range from such considered statements as "these wraps will put our product in the impulse class, where we have long wanted it to be" to such fulsome praise as "they will add new life to grocers' shelves and stand out like the oasis on the desert."

Definite sales increases were predicted by many of the brokers previewing the new wraps. To clinch those increases, Sunsweet plans to unleash extensive advertising, both in national media and at the point of purchase. In-store selling and display aids, a field never neglected by this brand, include giant full-color foil replicas of the new cartons, hanging banners and recipe booklets.

Summing up the project, Sales Manager Thayer says: "We think our new wraps have all the assets of a well-thought-out advertisement. They have attention value. They have appetite appeal. They give the transparent effect of film, thanks to their unusually life-like vignettes, yet they still possess the golden sparkle and protection of foil, which our lab men believe is by far the best kind of package for

our product. We firmly believe these new wraps will acquaint many more consumers with dried fruits and benefit not only our own grower-members, but the entire industry as well."

Sunsweet is so pleased with the design that it has given the designer a "credit line," at the bottom of the right-hand side panel.

CREDITS: Design program by Walter Landor & Associates, 143 Bush St., San Francisco. Label copy by Long Advertising, Inc., 19 N. Second St., San Jose, Calif. Foil wraps by Reynolds Metals Co., 2500 S. Third St., Louisville 1. Carton shells and shipping containers by Fibreboard Products, Inc., 1789 Montgomery St., San Francisco 11. Foil-covered display bin cartons by Schmidt Lithograph Co., Second & Bryant Sts., San Francisco.

How to get to the top

(This article continued from page 114) taining the company's unit sales at a maximum. During the initial distribution period of the boned chicken and turkey—at a time when the industry's standard pack was 36 cans—Swanson achieved notable results with a master shipping case containing 72 cans. Within the case, the cans were cartoned by the dozen, thus enabling the jobber to supply smaller retailers with cans in dozen units.

After national distribution was accomplished, Swanson switched to a 24-can shipping case, without separate inner cartons, for its canned products.

Frozen chicken parts and TV Dinners are also shipped in 24-carton master cases, but inside the case they are packed in four bags or cartons containing six individual cartons each.

The Swanson Unipak system, the first even case-weight method of packing poultry, solved a problem that had always vexed poultry processors: the odd case weights resulting from the lack of uniform weights among birds. By rejecting for shipping whole all birds lighter or heavier than a fixed 4-oz.-weight spread, the system resulted in cases that came out to an even pound weight. Today, the weight of every bird in a Swanson case is identical. This has permitted simplification of inventories, records and pricing, and has proved a boon to everyone dealing in poultry—processors, middlemen and retailers.

The great development of the chicken-parts market has been instrumental in the success of the Unipak



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PROTEX pads and blankets give you the maximum interior cushioning protection obtainable and fit virtually any product or assortment you can name! The cost is substantially lower than most other forms of interior cushioning and take only a fraction of the time to pack. Avail yourself of this important money-saving clean method of packing. The protection your products get is superb...resists all forms of shock and protects the finish of the product as well. Ease of packing, availability of ample supplies of packing material on hours notice are important too...you don't have to order far in advance of production or store supplies all out of proportion to their rate of consumption.

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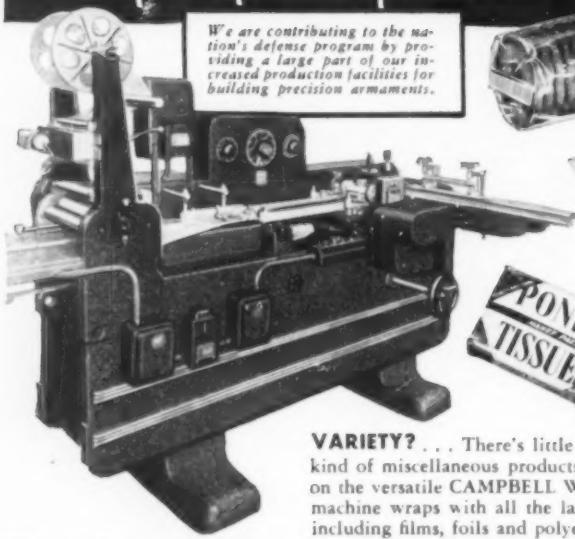


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**Cuts packaging costs—
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We are contributing to the nation's defense program by providing a large part of our increased production facilities for building precision armaments.



The perfect wrapper for:

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- FOODS AND BAKERY PRODUCTS
- PREPACKAGED TABLE MEATS, BACON, CHOPS AND PATTIES
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Manufacturers of Anilox and Gravure Presses, Folders, Interfolders, Laminators, Waxers, Embossers, Slitters, Sheeters, Roll Winders, Packaging Machines, Crepers and Tissue Converting Units.

scheme, because it absorbs all the underweight and overweight birds.

"The entire Swanson packaging program," says Mr. Pollock, now a vice president of Swanson's, "is designed to combine the utmost in protection and preservation of the product with merchandisable, eye-appealing packages."

There is a close interlocking of the packaging and sales functions in the Swanson company structure and President W. Clarke Swanson attributes much of the concern's success to the fact that he and his sales and merchandising executives—Mr. Pollock and advertising manager, Robert D. Cords—maintain extremely close contact with the packaging aspects of the business. The company has no separate packaging staff.

Here is the way Gilbert Swanson, chairman of the board, sums up the dynamic philosophy which has guided his company to its present enviable position: "There's always a better way. We are constantly amazed when we discover that there are many ways to improve a package that we thought was perfect a year or two before."

CREDITS: Cans by American Can Co., 100 Park Ave., New York 17; Continental Can Co., Inc., 100 E. 42 St., New York 17; Pacific Can Co., 290 Division St., San Francisco 3. Lithographed can lids by Continental Can Co., Inc. Cartons by The Lord Baltimore Press, Baltimore 13, Md.; Marathon Corp., Menasha, Wis.; The Gardner Board & Carton Co., Middletown, Ohio; Sutherland Paper Co., Kalamazoo, Mich.; Waldorf Paper Products Co., St. Paul 4, Minn.; Container Corp. of America, 38 S. Dearborn St., Chicago 3. Cellophane by E. I. du Pont de Nemours & Co., Inc., Wilmington 98, Del. and Olin Cellophane, 655 Madison Ave., New York 21. Aluminum TV Dinner trays by Foil Kraft, Inc., 1805 Sichel St., Los Angeles 31, and Reynolds Metals Co., Louisville 1, Ky. Aluminum-foil overwraps for TV Dinner by Reynolds Metals Co. and Pacific Coast Foil Co., 500 Sansome St., San Francisco 11. Cellophane and tissue-parchment lamination for TV Dinner by Marathon Corp. Aluminum foil pie pans by Foil Kraft, Inc., and Oh Gee Products Co., 1005 S. Fifth St., Minneapolis, Minn. Modified saran latex bags (Cry-O-Vac) by Dewey & Almy Chemical Co., Cambridge 40, Mass. Polyethylene bags by Howard Mfg. Corp., Council Bluffs, Iowa. Paper labels for canned products by Epsen Lithographing Co., 2000 California St., Omaha, Neb. Cartoning equipment by Kliklok Corp., 405 Lexington Ave., New York 17, and R. A. Jones & Co., Inc., P.O. Box 2055, Cincinnati 1, Ohio. Shipping containers by

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GLASS PACKAGING. Illustrated booklet catalogs full range of company's glass containers for the food, beverage, drug, and dairy industries. Includes data on metal and plastic closures for bottles and jars. Owens-Illinois Glass Co. (B-552)

PACKAGING EQUIPMENT. Brochure gives descriptions and features of six automatic packaging machines for bundling, banding, stamp affixing and high speed wrapping. Scandia Manufacturing Co. (B-553)

OUTDOOR SIGNBOARD. A unique sample of this company's all-weather signboard is offered in the form of a picture of a fully-clad, silk-screened girl who changes apparel upon being dipped in water. The Mead Sales Company. (B-554)

ACETATE FIBRE TAPES. Folder discusses how colored and transparent "Scotch" brand acetate fibre and film tapes have been engineered for varied industrial taping applications. Shows methods for using colored and printed tapes for combination deal packaging, labeling and identification, and for point of purchase messages. Minnesota Mining and Manufacturing Company. (B-555)

HEAT SEALER FOR BAGS. Data and specification sheet on the "Seal-O-Matic" Model CF-12 high speed bag heat sealer which includes a folding mechanism, making it possible to seal the bag close to the contents. Mercury Heat Sealing Equipment Company. (B-556)

PACKAGING GUIDE. New booklet provides information on Bakelite polyethylene, phenolic, styrene, C-11 and vinyl plastics and resins as used in the packaging of consumer and industrial products. Bakelite Company, Division of Union Carbide and Carbon Corporation. (B-557)

PAPER MILL CORES. Brochure deals with returnable and non-returnable cores as well as special metal ends for handling paper rolls. Details on specialty cores for waxed paper, cellophane, gummed tape, etc. Sonoco Products Company. (B-558)

"THE MARKEM STORY." Booklet traces the history and illustrates the manufacturing facilities of this company. Depicts the various types of marking and imprinting machines made for use on paperboard, fabrics, plastics, ceramics and other materials. Markem Machine Co. (B-559)

"CARTONS BY GAIR." Brochure contains design and construction information on 34 basic types of cartons. Includes details on packages made of various materials. Robert Gair Company, Inc. (B-560)

PROTECTIVE CUSHIONING MATERIAL. Folder describes the different types of "Celluliner" cushions, their specifications and special attributes. Also lists cost-reducing

advantages of this product. The Gilman Brothers. (B-561)

WAX SIZES. Booklet covers grades and applications and charts list physical and chemical properties of wax sizes used by manufacturers of paper and paperboard. Nopco Chemical Company. (B-562)

MATERIALS HANDLING. Description of materials handling trays and kits formed of thermoplastic sheeting and ranging from light-gauge film formed for contour packaging applications to heavy duty tote trays, is contained in this leaflet. Gregstrom Corp. (B-563)

FILLING MACHINES FOR FREE FLOWING PRODUCTS. Data on rotary "Whiz-Packer" filling machinery for handling containers with restricted openings; for filling products requiring settling in a tight pack; and for eliminating product dusting. Frazier & Son. (B-564)

CORRUGATED DISPLAY BACKGROUND. Details on "Corru-Set," a corrugated display background, are given in this brochure. The unit stands 7' 7" high and 11' 10" wide is described as being lightweight and easily set-up to display products. Gibraltar Corrugated Paper Company, Inc. (B-565)

BEMIS "QUANTACOLOR" BAGS. Booklet describes the "Quantacolor" method for selecting the most suitable combination of colors for a package, and its relationship to Bemis service. Bemis Bros. Bag Co. (B-566)

GLOSS INK PRINTING. Details on "CMC," a water soluble cellulosic which, when applied to paper, bonds the fibers permitting easier and more economical gloss ink printing. Test procedure and methods of use also covered. Hercules Powder Co. (B-567)

FILLERS FOR STILL AND SEMI-LIQUIDS. Data on the Horix fully automatic rotary, semi-automatic and hand-operated fillers for still liquids. Information on speeds, containers and products handled, and method of filling—gravity or gravity-vacuum. Horix Mfg. Co. (B-568)

PRINTING AND BAG MAKING MACHINES. Folder outlines printing and converting machines such as the "H.H.H. Jet," a multi-color flexographic press, the "Mata-dor" for producing flat and square paper bags at high speeds, and four multi-wall bag machines. H. H. Heinrich Co. (B-569)

MOISTURE INDICATORS. Data on two instruments for printers, lithographers, paper converters and mills for determining proper moisture content of paper and pressrooms to assure best operating conditions. Cambridge Instrument Company, Inc. (B-570)

HIGH-SPEED COUNTER. Leaflet on new mechanical counter with a special device that eliminates errors from carry over and prevents multiple counts. Described as containing counts up to one million and capable of speeds up to 3,000 per hour. Raycon Corp. (B-571)

BOX MAKING ADHESIVES. Folder contains information on company manufacturing pastes, gums, glues, sizes and resins, and contains a sample technical information blank, used to help solve adhesive problems. H. B. Fuller Co. (B-572)

LITHOGRAPHED CANS. Data on decorative lithographed cans used to merchandise candy, fruit cake, nuts, cookies and other foods. They are available in custom designs or any floral, seasonal and holiday patterns. Olive Can Co. (B-573)

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BOX-MAKING EQUIPMENT. Bulletin describes two machines, a single corner cutter, and a scoring machine, of interest to all box makers. M. D. Knowlton Co. (A-573)

HEAT SEALER. Information on "Sentinel" Heat Sealers, designed for the positive sealing of all coated or laminated barrier materials by the application of heat and pressure for controlled periods of time. Packaging Industries. (A-574)

SCALES. Data on scales which use the "Shadograph" principle to eliminate inaccurate reading of weights. Describes six different types of scales using this principle. The Exact Weight Scale Co. (A-575)

HIGH SPEED CAPPING. Folder illustrates the vast assortment of screw caps and snap closures which are applied automatically by high speed "Capem" machines manufactured by Consolidated Packaging Machinery Corporation. (A-576)

MEAT PACKAGING PROCESS. Literature describes complete packaging set-up which uses heat shrinkable 50 gauge saran film in conjunction with 30 or 40 gauge paper coated wire for wrapping a wide variety of meats. Describes wrapping, twisting, and shrinking equipment used in the process. Amsco Packaging Machinery, Inc. (A-577)

PAPER COST CALCULATOR. Sixteen page manual has charts and tables designed to provide quick and accurate computation of cost per 1,000 sheets of common weights and sizes of book papers, covers, bonds, ledgers and writings. Oxford Paper Co. (A-578)

AUTOMATIC CRATE ASSEMBLER. Folder on an automatically operated machine for assembling plywood crates into four basic styles from pre-fabricated "Ply-Fold" crate sections. Atlas Plywood Corp. (A-579)

HANDLING BULK MATERIALS. Booklet describes how the "Tote System" saves money on the handling of bulk materials. Data on Tote storage bins, tilts, screw feeds, and various other handling machines. Cost analysis shows some typical savings. Tote System, Inc. (A-580)

SPECIAL CAPPING MACHINE. Literature on new automatic capping machine designed to handle odd shaped caps and those with brushes, applicators, droppers, etc. Capper has 16 spindles permitting production speeds up to 150 units per minute. Progressive Machine Co. (A-581)

ROTARY PISTON FILLERS. Catalog gives information on the operation of four piston fillers for packaging viscous or semi-solid products into jars and cans. Gives specifications and dimensions of each machine. The Pfaudler Co. (A-582)

POLYETHYLENE FILM. Detailed technical manual analyzes the uses and the physical and chemical properties of "Cheslene" polyethylene film. Charts and tables give production data, mechanical and dielectric properties, permeability ratings. Chester Packaging Products Corp. (A-583)

GLASSWARE FOR DRUGS. Illustrated catalog gives complete purchasing data on company's "Moderne" line of vials, applicator bottles, powder and ointment jars and closures designed particularly for pharmaceutical products. Foster-Forbes Glass Co. (A-584)

CELLOPHANE APPLICATIONS. Handy guide in the selection and applications of cellophane. The folder outlines cellophane applications in the food, textile, tobacco, and other industries. American Viscose Corp. (A-585)

MATERIALS HANDLING EQUIPMENT. Folder explains a new combination tractor-trailer and tow line order-picking system for warehouses, and illustrates different floor trucks, dollies and industrial casters. Nutting Truck and Caster Co. (A-586)

SPECIALIZED PRINTING MACHINES. Booklet illustrates and describes 13 hand-operated and automatic machines for printing labels and other markings on metal, plastic, fibre, wood, rubber, or other surfaces. Single or multi-color models available. International Marking Machine Co. (A-587)

CAP FEEDER. Descriptive data on new cap feeding and sorting device equipped to handle molded or metal turn-on closures of all types. The machine, which handles four sizes with one setting, is specially designed to eliminate jamming and breaking. Pneumatic Scale Corp., Ltd. (A-588)

PLASTIC BOXES. Catalog lists specifications and prices of firm's wide line of rigid polystyrene containers. Boxes are heat-resistant, free from taste and odor, unaffected by acids, alkalies and alcohols. Bradley Industries. (A-589)

VIBRATORY FILLING MACHINE. Details on package filling machine designed to fill, by means of vibratory action, from 2 to 120 bags or containers per minute. Brochure includes details on belt conveyor attachment and automatic container feeder attachment. Stuyvesant Engineering Co. (A-590)

DRUM RINGS. Booklet on drum rings, closing tool, and accessories used where packaging is done in removable open heads. Describes bolted type, "Spin Seal," weld nut, overlapping, lever bolt, and other types of rings. Drum Parts, Inc. (A-591)

PLASTIC FILMS FOR PACKAGING. Informational brochure contains characteristics and application data on polyvinyl alcohol, polyvinyl chloride, polyethylene, and polyvinyl alcohol-polyethylene laminated films. Describes uses in packaging foods and other products. Reynolds Metals Co. (A-592)

OPENER-FILLER FOR POLYETHYLENE BAGS. Data on an air operated unit which overcomes static electricity problems in the filling of bags made of polyethylene, cellophane and other films with soft goods and odd shaped items. Enrich International Corp. (A-593)

SAMPLE LABEL KIT. Folder contains a wide variety of label samples including metallized plastic, gummed, and pressure sensitive type. Designed for shipping, product identification, promotion, and other uses. Allen Hollander Co., Inc. (A-594)

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Container Corp. of America; Hinde & Dauch, Sandusky, Ohio; Central Fibre Products Co., Omaha, Neb.; Omaha Box Co., 21 St. & Ave. H East, Omaha, Neb.; Gaylord Container Corp., 111 N. Fourth St., St. Louis 2, Mo.; International Paper Co., 220 E. 42 St., New York 17; Hoerner Corp., Keokuk, Iowa; Union Bag & Paper Corp., 233 Broadway, New York 7; Fibreboard Products, Inc., 1789 Montgomery St., San Francisco 11.

Labels that can take it

(This article continued from page 121) stock is the fact that it is moderately resistant to the absorption of oil which might be spilled on the label when using the product in the home. Furthermore, it does not pick up dirt easily; dust accumulated in store displays can be readily wiped off to restore the labels to their original fresh appearance.

In addition to white, the drum-finished can and bottle label stock is available in several brilliant, light-fast colors which are said to be free from mottle.

In the printing of the Swift Jewel Oil and Swift'ning labels, fast-drying transparent inks, similar to those generally used on foil, are employed because of the hardness and non-absorbency of the stock. Their transparency permits the exceptional gloss and brilliance of the paper surface to come through even in solid printed areas.

According to the manufacturer of this new label stock, its non-absorbent quality requires, during the printing operation, the usual precautions against sticking and blocking in the delivery. Although the best results seem to be obtained with gloss inks, regular printing inks may be used. Metallic inks print especially well on the stock, but the extreme smoothness of the surface calls for extra care in bronzing.

While the stock lends itself particularly to printing by the gravure process, using cellophane-type inks and cylinders, it can also be successfully printed by the flexographic process if cellophane-type flexographic inks are employed. In fact, it is pointed out, ink requiring heat to dry is particularly suited to this new high-gloss sheet.

CREDITS: New Swift Jewel Oil and Swift'ning labels printed by Lustour Corp., 7 N. Brentwood Blvd., St. Louis 5, Mo., using Colorcast label drum-finished paper made by The Champion Paper & Fibre Co., Hamilton, Ohio.



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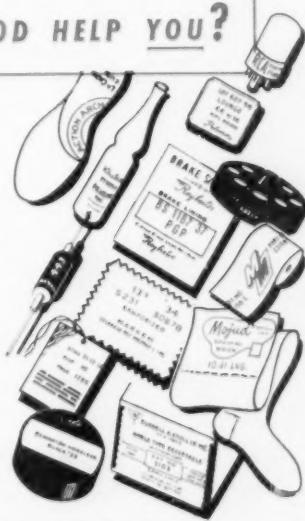
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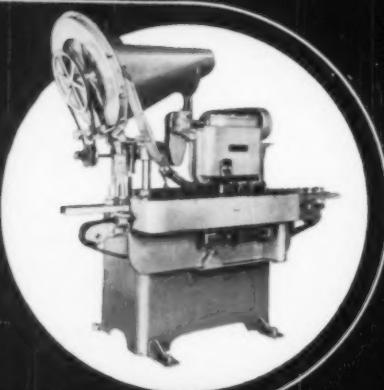
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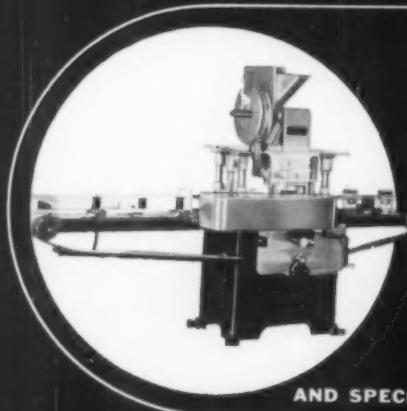
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Business outlook

The consensus of container manufacturers' views, says the Department of Commerce in its Winter 1954 issue of its quarterly *Containers and Packaging*, is that the over-all fourth-quarter volume of business will approach the 1953 total. With this representative opinion in mind, the annual volume of the container field can be viewed at about 5% below the 1953 level. Operations of several container industries, however, are expected to exceed the 1953 volume; these include veneer packages, tight cooperage and paper milk containers. Operations of the metal-can, textile-bag and closure industries in 1954 also appear to equal or possibly exceed the 1953 total.

What are the business prospects for 1955? On this point, the Field Office survey on container trends reveals that, almost without exception, container managements' view is one of strong confidence and enthusiasm. This optimism is, in part, a reflection of the added strength of year-end business. In addition, although container management's view is one of continuation in 1955 of intensive competition, pressure on prices and a narrowing of the profit-cost relationship, their favorable outlook is engendered by the presence of strong underlying economic factors.

Business thinking resulting from optimistic forecasts of such basic industries as iron and steel, construction and automotive certainly appears to justify the container managements' enthusiastic outlook for the new year, the Department says.

Cans for chemicals

(This article continued from page 144)

It has been found that some chemical products will attack the solder and tend to remove it from the side-seam folds. This is evidenced by a discoloration of the solder in the folds and sometimes by the accumulation of a metal-bearing sediment in the bottom of the container. This difficulty may often be circumvented by restricting container usage to outside-soldered cans.

Cemented-side-seam containers are subject to similar difficulties of reaction with the product and resultant softening of the cement. Container tests and subsequent examination of the cement in the side-seam folds are

necessary to determine that cemented side seams may be used safely for any particular product.

For the new product

Thus far only a few of the host of different types of cans which are manufactured for nonfood products have been considered. However, the containers which have been described cover the great majority of products which are classified as chemical specialties. In step with new-product developments in the chemical-specialties field, a continued program of container development is carried out to meet the packaging requirements of these products. The development of the aerosol, or pressure can, (which was described earlier) is a good example of this. Another, and more recent development, is the liquid-detergent can. This can is similar to the round cone-top can, but has many basic differences in construction. The detergent can has a cemented side seam and a specially designed nondrip nozzle which is assembled to the top end by seaming or crimping. The nozzle itself may be fabricated from either aluminum or plastic, depending on the chemical nature of the product to be packed. The interior of the can may be plain, or enameled with any one of a variety of protective coatings. As this can was specifically intended for liquid detergents, which are a corrosive group of products, interior enameling is the general rule and the can was designed to utilize fully the protective properties of these enamel coatings.

Summary

This discussion of factors relating to the packaging of chemical specialties in metal cans has included brief considerations of container styles, formulation variations and container-testing procedures. Because the evaluation of metal containers consists largely of inspection of packed cans for indications of adverse reactions, consideration has been centered on what those indications may be. From this, one might be led to suppose that packaging in metal cans presents difficult problems. Actually, a large proportion of today's products are packaged without extensive prior container tests and meet with ready consumer acceptance. However, the smaller remaining portion of products requires a well-planned test program to develop in each case the proper specifications for an adequate container.

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FOR SALE: Because of packaging change in our line the following equipment, in excellent working condition, is offered at tremendous savings: 1—Simplex Model #4 Cello Bag Making Machine, 1—Amco Cello Bag Jaw Sealer Model TH, vacuum capper, delivery, ball type hole punch, 2" jaws and stand. Inquiries invited. Write O. D. N. Miller, Wells Lamont Corp., 1791 Howard Street, Chicago 26, Illinois.

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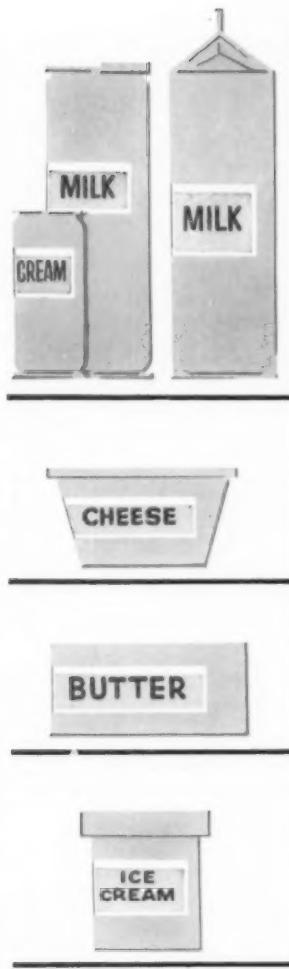
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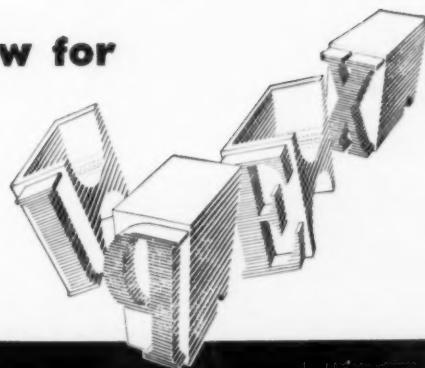
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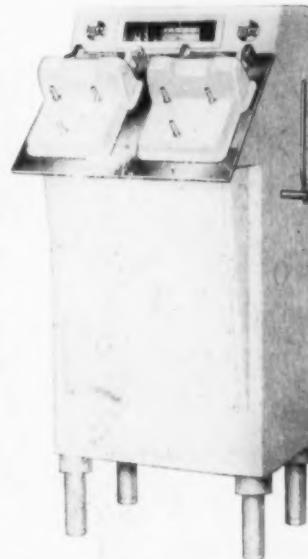


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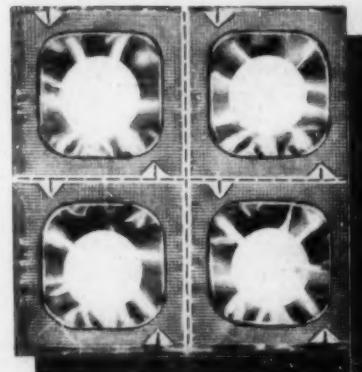


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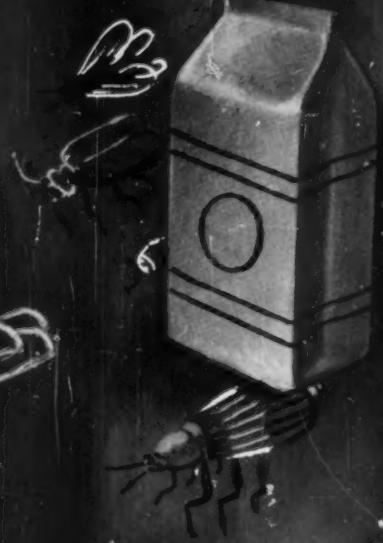
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